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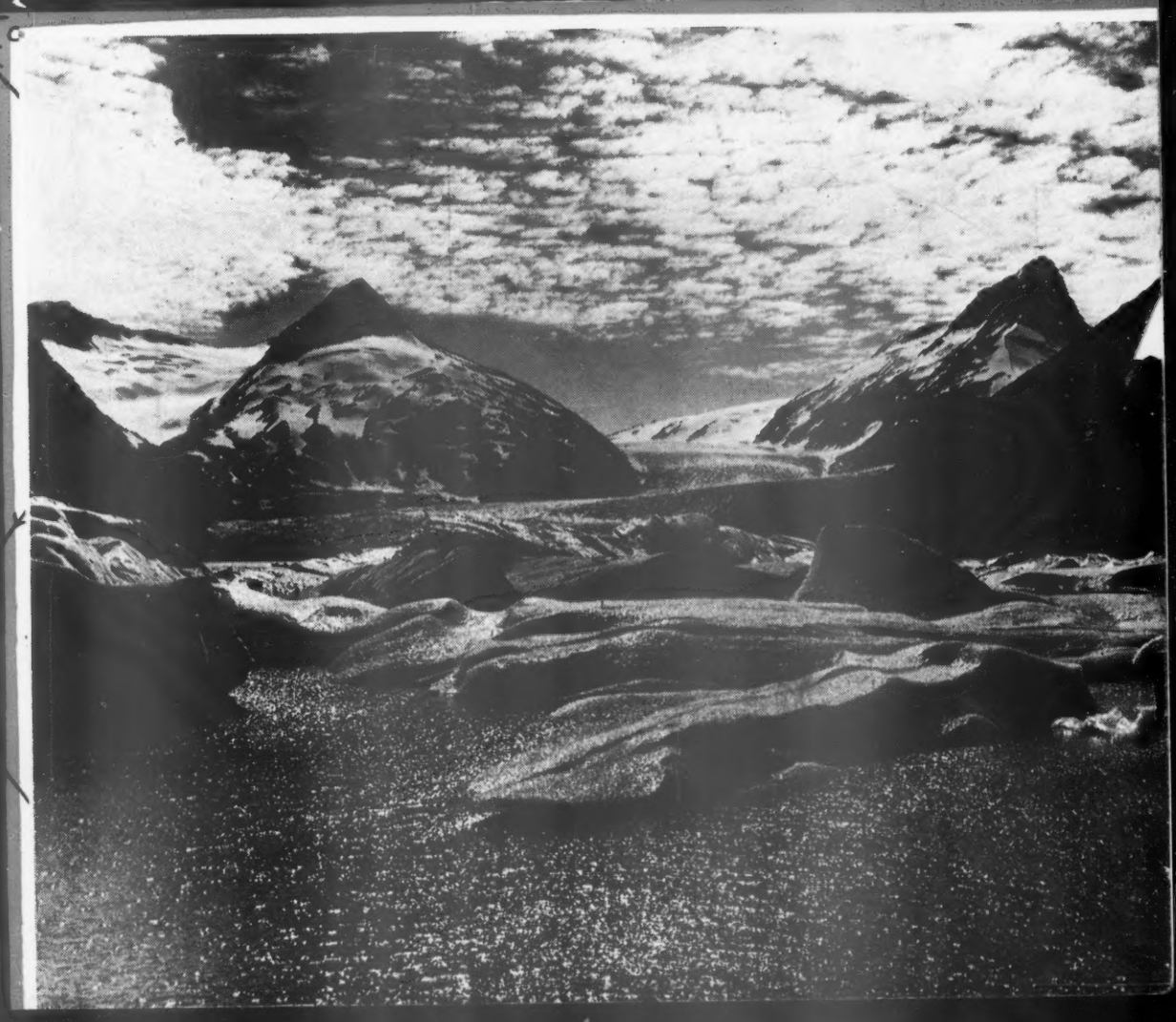

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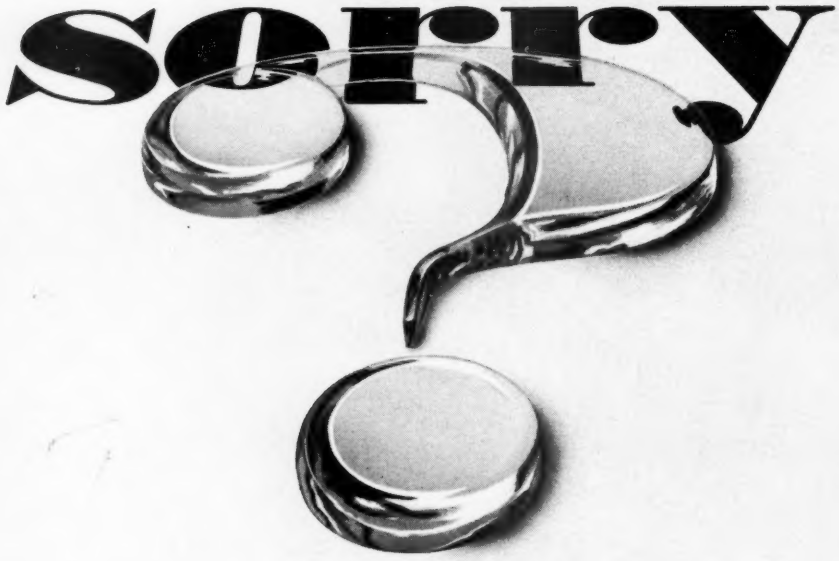

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References: 1. Cronk, G.A.; Naumann, D.E., and Casson, K.: Antibiotics Annual 1957-1958, New York, Medical Encyclopedia Inc., 1958, p. 397. 2. Childs, A.J.: Brit. M.J. *1*:660 (Mar.) 1956. 3. Newcomer, V.D.; Wright, E.T., and Sternberg, T.H.: Antibiotics Annual 1954-1955, New York, Medical Encyclopedia Inc., 1955, p. 686. 4. Gimble, A.I.; Shea, J.G., and Katz, S.: Antibiotics Annual 1955-1956, New York, Medical Encyclopedia Inc., 1956, p. 676. 5. Stone, M.L., and Mersheimer, W.L.: Antibiotics Annual 1955-1956, New York, Medical Encyclopedia Inc., 1956, p. 862. 6. Campbell, E.A.: Prigot, A., and Dorsey, G.M.: Antibiotic Med. & Clin. Ther. *4*:817 (Dec.) 1957.

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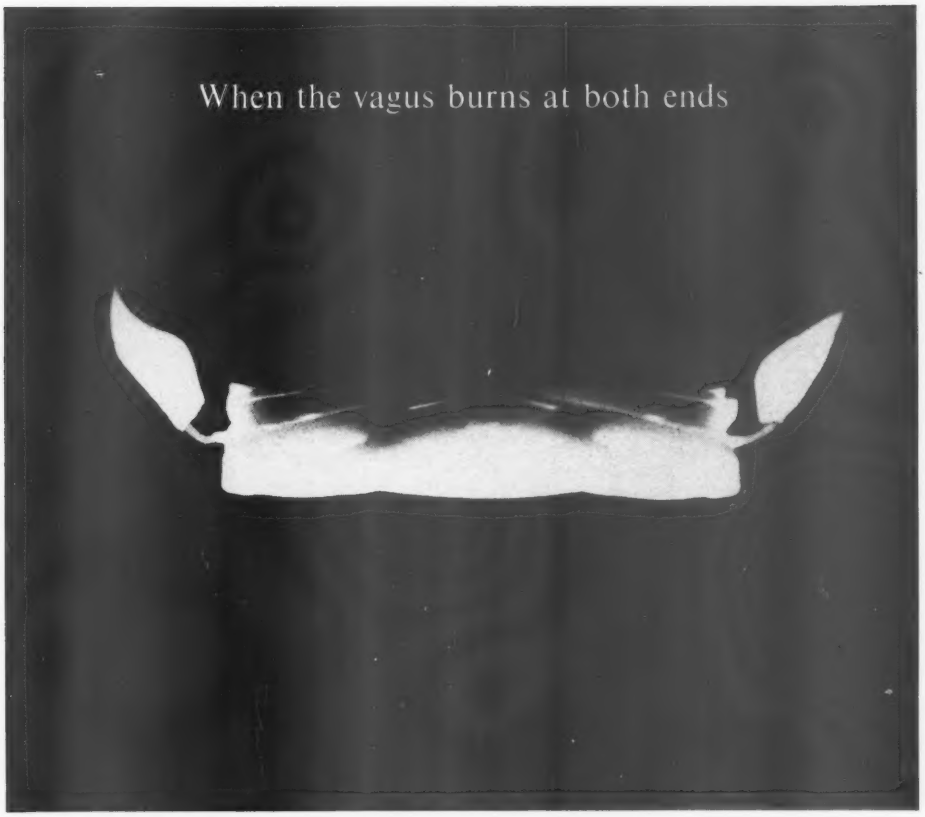

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Official Journal of the Alaska State Medical Association

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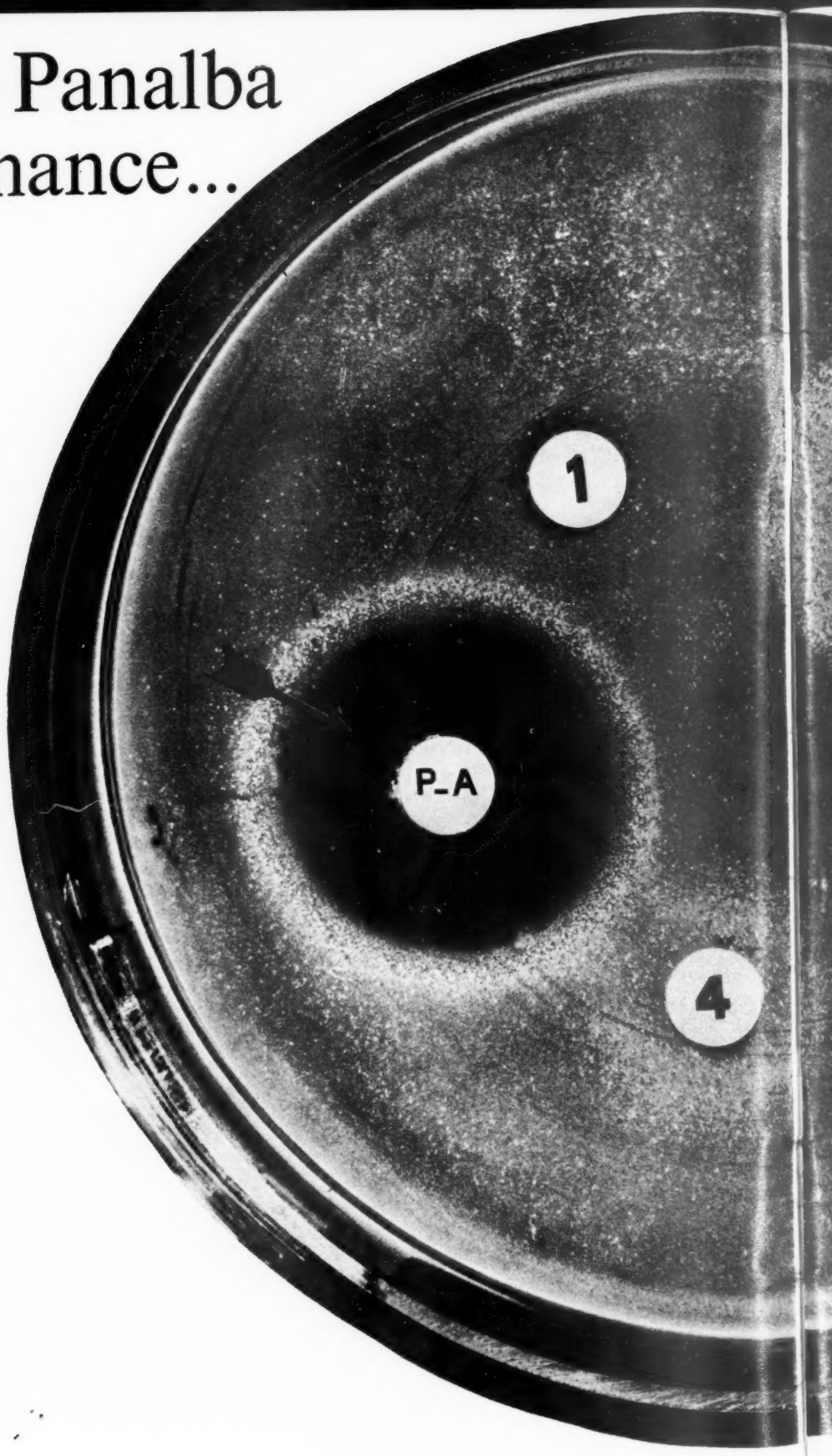

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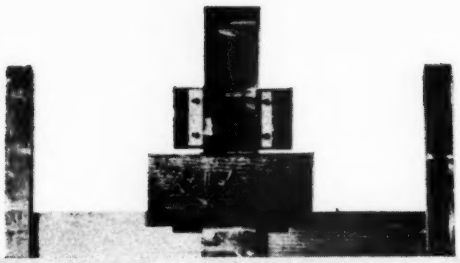

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RECOGNITION OF THE WOLFF-PARKINSON-WHITE SYNDROME ON ROUTINE ELECTROCARDIOGRAMS

HENRY WILDE, M.D. and JACK WM. GIBSON, M.D.
JUNEAU

The routine recording of an electrocardiogram as part of a general health survey in young adults without symptoms suggestive of cardiovascular disease might be considered as a procedure of still debatable merit. It is nevertheless commonly performed; no doubt frequently not as an adjunct but as a poor alternative to an accurate history and examination. The discovery of incidental electrocardiographic abnormalities in such instances is not uncommon[1] and their misinterpretation to the patient may result in disabling new symptoms or the aggravation of existing minor variations in heart rhythm and rate. Myofascial chest consciousness frequently develops into chest pain under such circumstances and may lead physician and patient into even deeper conviction that severe heart disease is present. It is well documented that the following are some electrocardiographic abnormalities occasionally found in asymptomatic young subjects without heart disease:

1. ST-segment elevation and depression.[2,3,4]
2. T-wave flattening and inversion (the juvenile pattern).[5]
3. Partial and complete heart block.[6]
4. Partial and complete right bundle branch block.[7]
5. Paroxysmal and permanent atrial fibrillation.[7]
6. The Pre-exitation or Wolff-Parkinson-White syndrome.

The first three abnormalities may be transient or they may be demonstrable in successive tracings. They are particularly common in association with fear, tension or anxiety states and in psychotic individuals.[2,8] They can be frequently abolished by sedation, the use of anticholinergic drugs or exercise.[1,2] The patient with so-called neurocirculatory asthenia has a particularly high incidence of these electrocardiographic variants.[9] The fact that congenital complete heart block is compatible with no evidence of organic heart disease, a normal life expectancy and indeed a high exercise tolerance has been demonstrated by the discovery of such a complete block in an Olympic Games athlete. Permanent atrial fibrillation without heart disease is rare but likewise well documented.[7] Up to 50 per cent of patients with complete right bundle branch block have no symptoms or signs of heart disease and this anomaly by itself does not alter life expectancy.[7] Even the occasional rare case of left bundle branch block in a healthy individual has been reported.[7]

Dr. Wilde

The Wolff-Parkinson-White syndrome consists of an electrocardiographic anomaly that fulfills the following criteria:

1. A short P-R interval (0.10 seconds or less).
2. Widened and slurred QRS complexes (0.11 to 0.14 seconds).

3. Slurring at the onset of the upstroke of R (the delta wave).

The shortened P-R interval is exactly compensated by the widened QRS complex which may have a left or rarely right bundle branch block configuration. A wide spectrum of associated ST and T wave abnormalities are possible.[10] The syndrome may be constantly present, it may disappear spontaneously or following digitalis and quinidine administration. Anticholinergic drugs and exercise may both abolish and initiate the Wolff-Parkinson-White syndrome. A particular pre-disposition to attacks of paroxysmal supraventricular tachcardia, paroxysmal atrial flutter and rarely atrial fibrillation and ventricular tachycardia marks the patient with this anomaly.[11] It has been reported in children as well as in adults of all age groups and it is thought likely that this is a congenital variant of the conduction pathway between atria and ventricles.[11,12,13,14] The view that the abnormality is due to an accessory conduction pathway between atrium and ventricle which "shortcircuits" the AV-node is founded on sound evidence and has been generally accepted.[13] The shortened P-R interval may be intermittent or constant. QRS abnormalities may be constantly present or intermittently associated with a constantly present shortened P-R interval. If QRS abnormalities are intermittent they usually have a bundle branch block configuration. A short P-R interval without associated QRS deformity is thought to constitute an atypical or partial form of the Wolff-Parkinson-White syndrome.[11] It is likewise associated with a high incidence (11 per cent in one series) of attacks of paroxysmal tachcardia.[15]

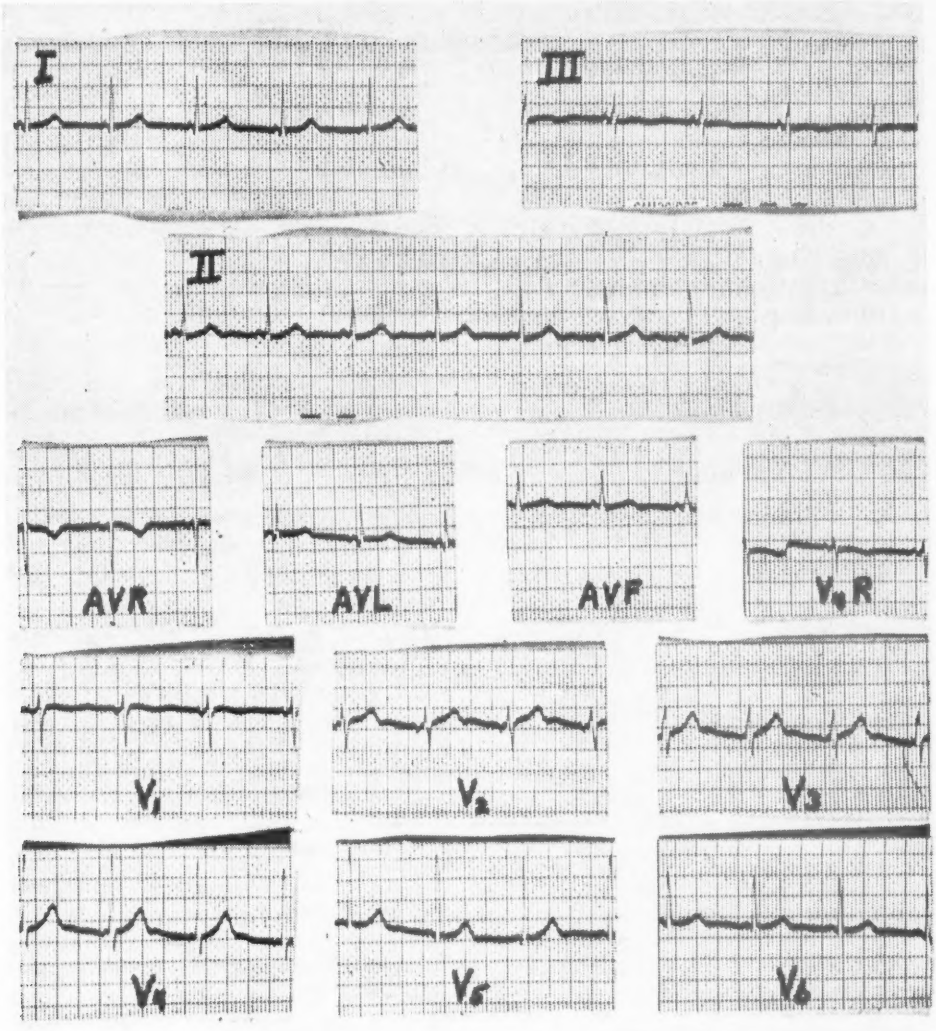
The Wolff-Parkinson-White or Pre-Excitation syndrome is then a purely electrocardiographic diagnosis of no serious prognostic importance other than leading the physician to expect a higher incidence of paroxysmal tachcardia. Treatment consists of reassurance and management of any paroxysmal arrhythmia as in other patients without pre-excitation. It is possible that digitalization or quinidine in the usual dose may prevent attacks of tachycardia in some individuals with this anomaly. The still frequent lack of understanding of this electrocardiographic variant and the rather unfortunate frequency with which a diagnosis of coronary artery disease is made in patients with the Wolff-Parkinson-White syndrome was again emphasized by Dr. Wolff in a recent review.[17]

Three recent cases of pre-excitation encountered at the Juneau Clinic illustrate some of the problems in diagnosis and management.

CASE 1 (O.S.,JC370) This 46-year-old woman has a long history of psychosomatic gastrointestinal complaints and mild rheumatoid arthritis. During the past 10 years she noted occasional attacks of paroxysmal tachcardia which always subside within 10-30 minutes. There were no other symptoms or signs of cardiovascular disease. A thorough medical evaluation revealed no evidence of heart disease other than an electrocardiogram with an abnormally shortened P-R interval (0.08 seconds) without QRS abnormalities (Figure). A diagnosis of a typical Wolff-Parkinson-White syndrome was made, the patient was mildly sedated with phenobarbital and was told that she has no heart disease. No further treatment is indicated unless tachycardia becomes more frequent or prolonged.

CASE II (R.M.,JC 1503). This 41-year-old army officer enjoyed excellent health until he experienced an airplane accident 3 years ago which resulted in several rib fractures. He was hospitalized for observation and the only remarkable notation on his hospital chart was a persistant tachycardia of up to 150 beats per minute. This lasted 24 hours and recovery was otherwise uneventful and complete. A recent examination was carried out at the request of the Army and included an electrocardiogram. This revealed a classical Wolff-Parkinson-White syndrome (Fig. II). The officer was told about the conduction anomaly, was reassured that it is harmless and his re-enlistment has since been approved.

CASE III (J.M.,JC1366). This 40-year-old female schoolteacher's past history is unremarkable with the exception of glomerulonephritis at 15, a normal pregnancy at 25 and a miscarriage at 37 years of age. During a recent visit to Seattle she requested a "check up" because of a persistent post-nasal discharge. Physical examination at that time apparently revealed no significant abnormalities other than myopia, tonsilar tags and a minimal endocervicitis. An extensive "battery" of laboratory examinations included normal hemograms, a chest film which revealed



Electrocardiogram, Case 1.

bilateral cervical ribs, a normal serum cholesterol, a normal radioactive iodine uptake and an electrocardiogram which was interpreted as showing left bundle branch block. In spite of the absence of any symptoms or physical findings suggestive of heart disease at that time, a diagnosis of coronary artery disease was made and the patient was told to resign her position and avoid stress and exertion. She was, however, not willing to accept this diagnosis and consulted one of us somewhat later. She now gave a history of anterior chest wall tenderness unrelated to exertion as well as of frequent attacks of rapid heart action. Both symptoms were stated to have been present for years but had become much more pronounced since the patient had been told that she had coronary artery disease. A physical examination was unremarkable. Cardiac films revealed a normal heart. A resting electrocardiogram demonstrated a short P-R interval with an intermittent QRS deformity showing a left bundle branch block configuration (Fig. III). A diagnosis of Wolff-Parkinson-White syndrome with intermittent QRS deformity was made and the patient was reassured that this is a rare conduction anomaly which is not indicative of coronary artery disease. She was told to resume her occupation and all other activities which she has since done. Digitalization completely abolished the attacks of paroxysmal tachycardia which,

mainly due to "heart consciousness," had become somewhat of a problem. Physiotherapy and occasional mild sedation with phenobarbital notably improved the myofascial chest wall pain.

The bizarre electrocardiographic patterns of the Wolff-Parkinson-White syndrome must appear very ominous to a physician who is not familiar with the less common "functional" electrocardiographic abnormalities. It is therefore in order to caution once again against premature electrocardiographic diagnoses of organic heart disease. It is perhaps also worth while to remember that a normal cardiogram, in the other extreme, does not necessarily exclude the presence of such severe forms of organic heart disease as myocardial infarction (the "silent infarct" has been well documented[7]), ventricular hypertrophy[16], as well as various forms of rheumatic (notably mitral stenosis) and congenital heart lesions. A carefully taken history and physical examination must augment the electrocardiogram which only in conjunction with the total clinical picture becomes a useful tool.

SUMMARY

Not all electrocardiographic abnormalities are indicative of heart disease. A wide variety of changes in the P-R, S-T, T and even QRS complexes are occasionally encountered with alterations in the autonomic nervous system or as minor congenital abnormalities of cardiac electrophysiology. The Wolff-Parkinson-White syndrome consists of abnormally rapid conduction of the atrial impulse to the ventricular myocardium with frequent secondary deformity of the QRS complex. It predisposes the subject to paroxysmal arrhythmias but does not significantly alter life expectancy. The proper recognition of this and other "functional" electrocardiographic anomalies may prevent anxiety, economic loss and "heart disease of electrocardiographic origin."

We are indebted to the Division of Health, State of Alaska, for preparing the reproductions of our electrocardiographic tracings.

BIBLIOGRAPHY

1. Wasserburger, R.H. and Lorentz, T.H.: Effect of Hyperventilation and Pro-Banthine on isolated RS-T segment and T-wave abnormalities. Am. Heart J. 51,666,1956.
2. Wilde, H.: "Functional" Electrocardiographic Abnormalities. New Eng.J.Med. 258,735,1958.
3. Prinzmetal, M.: Clinical implications of errors in electrocardiographic interpretation: heart disease of electrocardiographic origin. J.A.M.A. 161,138,1956.
4. Brody, J.I. et al: Review of 3,369 electrocariograms in young male hospitalized patients. Am.Heart J. 53,821,1957.
5. Wasserburger, R.H.: Observations on "juvenile pattern" in adult negro males. Am.J.Med. 18,428,1955.
6. Campbell, M., and Thorne, M. G.: Congenital heart block, Brit. Heart J. 18, 90, 1956.
7. Friedberg, C. K.: Diseases of the Heart. W. B. Saunders, Phila. 1956.
8. Grau, S.: The Effect of the psyche upon the Electrocardiogram. Am.J.Cardiol 2,184,1958.
9. Wendkos, M.H. and Logne, R.B.: Unstable T-waves in leads II and III in persons with neurocirculatory asethenia. Am.Heart J. 3,711,1946.
10. Grayzel, J.: Electrocardiographic Criteria in the Differential Diagnosis of Pre-Excitation (Wolff-Parkinson-White) Syndrome and Arteriosclerotic Heart Disease. New Engl.J.Med. 259,369,1958.
11. Bellet, S.: Clinical Disorders of the Heart Beat, Lea & Febiger, Philad. 1953.
12. Nadas, A. S.: Pediatric Cardiology. W. B. Saunders, Philad. 1957.
13. Wolff, L.: Anomalous Atrioventricular Excitation (Wolff-Parkinson-White Syndrome), Circulation 19,14,1959.
14. Harnischfeger, W.W.: Hereditary occurrence of the Pre-Excitation syndrome with re-entry mechanism and concealed conduction. Circulation 19, 14, 1959.
15. Lown, B. et al.: Syndrome of short P-R interval, normal QRS complex and paroxysmal rapid heart action. Circulation 5,693,1952.
16. Griep, A.H.: Pitfalls in the electrocardiographic diagnosis of left ventricular hypertrophy. Circulation 20, 1959.
17. Wolff, L.: Diagnostic Clues in the Wolff-Parkinson-White Syndrome: New Eng.J.Med. 261,13,1959.

MALIGNANT ECHINOCOCCUS DISEASE OF THE LIVER

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USPHS ALASKA NATIVE HOSPITAL
ANCHORAGE

Although there are still wide gaps in our knowledge of echinococcosis, a considerable body of information has been accumulated on the two forms of hydatid disease occuring in man in Alaska. Most of this has come from the studies of Rausch and co-workers at the Arctic Health Research Center in Anchorage. It is the purpose of this communication to review the more recent work which demonstrates that the alveolar form of the disease is caused by a distinct species of **Echinococcus,** and to report our experience with three cases having fatal termination.

Echinococcus granulosus (Batsch, 1786) is the best known species of Echinococcus and was long considered the only one found in man. The definitive host of this tapeworm is usually the dog or wolf, in which the adult worms occur in the intestine. The intermediate host, harboring the larval stage, is a grazing animal such as various species of deer, cattle and sheep; such animals become infected by eating tapeworm eggs discharged in the feces of canine animals. The definitive host becomes infected by eating the involved viscera of the intermediate host.

Echinococcus multilocularis (Leuckart, 1863) has a similar life cycle. A canine animal, usually a dog or fox, serves as the definitive host. However, rodents are the natural intermediate host. This species of tapeworm has been referred to in the literature under the specific names **E. alveolaris** (Klemm, 1883) and **E. sibiricensis** (Rausch and Schiller, 1954).

Man may be the intermediate host for either **E. granulosus** or **E. multilocularis.** At the Alaska Native Health Service Hospital in Anchorage, those patients in whom we were able to make a positive diagnosis surgically of infection by **E. granulosus** all harbored the parasite in the lung, the larval cestode occuring there as a unilocular

cyst (Fig. 1). On the other hand, the patients having proven alveolar hydatid disease all had the primary involvement in the liver. The latter group represents **E. multilocularis** infections (Fig. 2).

Conversations with a number of medical colleagues outside Alaska, and references to medical colleagues outside Alaska, and references to medical texts and text books on human parasitology indicate that in the United States, at least, the fact that alveolar hydatid disease is produced by a parasite distinct from **E. granulosus** is not generally known nor readily accepted. It has been stated by those who dissent with the thesis being presented here, that the alveolar form of the disease, seen most typically in the liver, is produced by **E. granulosus,** and that the unusual form of the parasite seen in some cases is due to a differ-

ent host response. That this is not true, and that there is actually a separate disease produced by a species of **Echinococcus** has been substantiated by both morphological and epidemiological evidence. The 1957 edition of **Craig and Faust's Clinical Parasitology** indicates that multilocular hydatid disease is a clinical entity caused by a distince species of cestode, **E. multilocularis**[2].

Rausch (1956)[3] and Vogel (1957)[4] have demonstrated morphological diferences between the adults of the two species of cestodes, and these are sufficient in degree to separate the two species. Differences in the larval stages as regards morphology, manner of development, and host specificity are likewise sufficient to distinguish the two species. Rausch and Jentoft (1957)[5] were successful in culturing the larval form of **E. multilocularis in vitro,** demonstrating its characteristic exogenous budding. **E. granulosus,** on the contrary, does not bud exogenously, but contains all larval elements within a single cyst which typically is surrounded by a dense layer of connective tissue of host origin. Such a cyst enlarges by an expansive type of growth.

The exogenous budding of the larval **E. multilocularis,** seen in both its natural and human intermediate hosts, imparts to this parasite its malignant potential, since the budding cysts actually progressively invade the surrounding tissues of the host. Moreover, as will be seen in our case presentations, it is likely that hematogenous occur as the result of invasion of blood vessels. The parasitic tissue remains viable at the interface between parasite and host, but in man necrosis usually occurs centrally.

If liquification develops in the necrotic portion of the larval mass the lesion may superficially resemble a unilocular cyst, but the exogenously budding, invasive nature of the parasitic tissue at the periphery, and the granulomatous host response, distinguish the lesion from the unilocular cyst of **E. granulosus.**

Only by rupture of the containing pericyst could the latter spread into neighboring host tissues.

As regards host specifically, Rausch and others have been almost routinely successful in infecting microtine rodents with the larvae of **E. multilocularis,** but it has not been possible to infect these same species of rodents with the larvae of **E. granulosus**[5]. This provides additional clear-cut evidence for the existence of two species of **Echinococcus** infecting man.

From an epidemiological standpoint, it is noteworthy that alveolar hydatid disease of the liver is known only from certain regions of the world (e.g., Siberia, southern Germany and the tundra zone of Alaska), and it has not been reported from many areas where the unilocular infections of **E. granulosus** are commonly seen (e.g., Greece, Australia, Canada and various regions of South America). Unilocular **E. granulosus** infections of the lungs have been seen by us in natives from virtually all parts of Alaska, including both the tundra country and the forested interior. On the other hand, we have seen alveolar hydatid disease of the liver only in natives from such areas as St. Lawrence Island and the northwest tundra country about Kotzebue and Point Hope. We have never observed alveolar hydatid disease in the people from the forested interior nor from the arctic mountains. It is difficult to account for the restricted distribution of **E. multilocularis** in Alaska. It is known, however, that the various species of microtine rodents (such as the red-backed vole and the tundra vole) which serve as its intermediate host are found most abundantly in the tundra zone, and other factors, not yet defined, may be involved.

Following are reports of three cases of multilocular hydatid disease of the liver treated by us at the Public Health Service, Alaska Native Hospital, Anchorage.

CASE No. 1

R. T. was a 53-year-old Eskimo man from Point Hope, a village on the far northwest coastal tundra of Alaska, who was admitted to the Native Hospital in Anchorage 7-24-57 with a chief complaint of pain in the right upper abdomen continuously for four months, and intermittently for several years. He denied anorexia, weight loss or any history of jaundice. He had had an upper abdominal operation five years earlier, the exact nature of which was not known.

Physical examination revealed a well-developed Eskimo man of 146 pounds. No icterus was noted. Fine rales were heard in both lung fields and breath sounds were decreased at the right base. The liver was palpable five finger breadths below the right costal margin and three finger-breadths below the left costal margin. Different

observeers were not in agreement as to whether the liver was nodular or smooth, but it was nontender. One observer thought the spleen was slightly enlarged.

Laboratory examination: WBC 11,750. Differential white blood count: neutrophils 63% (8 stabs); lymphocytes 31%; Eosinophils 6%. Hemoglobin 11.6 Gm %. Routine urinalysis normal. Stools for occult blood varied from slight trace to 3+ guaiac. Serum bilirubin 5 mgm % on 8-19-57 and 1 mgm % on 8-26-57. Alkaline phosphotase 11.3 Bodansky units. BSP retention 6% in 45 minutes. Prothrombin time 14 and 17 seconds, control 12 seconds. Total serum protein 11.6 Gm % and A/G ratio 4.4/7.2. Urine negative for Bence-Jones protein. Sedimentation rate 44mm/hour Wintrobe. PPD No. 1 negative. PPD intermediate positive. Sputum collected 9-17-57 was reported to show positive culture for Mycobaterium tuberculosis 10-25-57. Chest x-ray showed linear scarring of both apices but was not suggestive of active disease. Plain x-ray of the abdomen, IVP, upper G.I. series and a barium enema were all reported normal except that they suggested the presence of a large mass in the upper right abdomen, extrinsic to the colon.

Needle biopsy of the liver 8-8-57 was reported as normal liver. Laparotomy 9-5-57 revealed a large smooth left lobe of the liver, and most of the right lobe was replaced by a large, yellowish tumor presenting at the serosal surface on the right margin. Apparently compressed liver overlay the tumor elsewhere. A biopsy was taken at the junction of the tumor with relatively normal liver. At the conclusion of this operation it was believed that the lesion was a neoplasm of the liver, type undetermined. Microscopic studies of this tissue were done both by our consultant pathologist in Anchorage and in the pathology department of the United States Public Health Service Hospital in Seattle. Both reported a granulomatous process with areas of necrosis. The initial impression of one was that the lesion was tuberculosis. The other favored an animal parasite as the etiologic agent, based on the observation of bits of material in the sections which were consistent with portions of a parasite. The report of acid-fast bacilli in a sputum culture was obtained in October. In November a supplemental report from the pathologist who had earlier favored an animal parasite as the responsible agent stated that since further study of the sections had failed to clearly demonstrate an animal parasite, and since Langhan's type giant cells were seen in the granulomatous lesion, the diagnosis was most likely tuberculosis of the liver. In the face of all this evidence it was agreed by all that the lesion in the liver was probably a tuberculoma. Late in the fall of 1957 the patient was transferred to the PHS, Alaska Native Hospital at Mt. Edgecombe, Alaska, for long-term drug therapy for tuberculosis.

While at this institution the patient experienced tonic seizures accompanied by a post-istal state and for this was referred to the USPHS Hospital, Seattle, for further evaluation. He made a favorable response to treatment with antileptics, but further observation and neurological consultation failed to result in a definitive diagnosis of the central nervous system lesion during his life-time. By the spring of 1958 further review of the biopsy material from the liver, including comparison with material which by this time had been obtained from case No. 2, finally resulted ina correct diagnosis of the hepatic lesion. This was supported by a very high titer on a hemagglutination test for echinococcosis. Therefore, in the spring and summer of 1958 a staged marsupialization of the lesion in the liver was done. By August, 1958, the fistula from the liver seemed to be slowly healing when the patient had a series of grand mal seizures not controllable by drugs, and he finally lapsed into coma from which he did not recover.

Autopsy revealed multilocular hydatid disease of the liver and marked hepatomegaly, the liver weighing 4,000 grams. There was a cavity in the right lobe of the liver described as "grapefruit-sized." The right lobe of the liver extended down to the right kidney and was densely adherant thereto. In addition to the above there was found in the vermis cerebellum a gray, fibrous, 4 cm echinococcus lesion and associated internal hydrocephalus. The lesion of the cerebellum was considered to be the cause of death.

CASE No. 2

T. S. was a 62-year-old Eskimo woman from Kotzebue, located on the coast north of the Seward peninsula. In the autumn of 1957 she had noted anorexia, weight-loss and easy fatigability for which she was seen at the PHS, Alaska Native Hospital, Kotzebue, in October, 1957. She was noted at that time to have marked hepatomegaly.

She had had an upper abdominal operation in Kotzebue in 1947.

Complete records of her previous hospitalization were not available to us, but from the information available it was believed that she had been found to have a "scirrhous carcinoma of the duodenum." It was therefore believed, at the time of her present admission, that she suffered from metastases to the liver from a malignancy primary in the duodenum.

At the time of her admission she complained only of poor appetite and occasional nausea and vomiting. She denied pain and intolerance of specific foods. She had noted her stools to be yellow and her urine dark.

Physical examination revealed a thin, chronically ill Eskimo woman of 123 pounds. Her sclerae were icteric. Moist rales were heard at the right base and the percussion note was decreased over the lower right lung field. The abdomen was distended and there were dilated periumbilical veins. The liver was markedly enlarged, extending almost to the right iliac crest. One observer described it as nodular. Healed surgical scars were noted in the epigastrium and in the suprapubic area.

Laboratory examination: WBC 7,300 on admission, and 11,650 on 3-21-58. Differential white count was: neutrophils 79%; lymphocytes 19 %; monocytes 1%; and eosinophils 1%. Hemoglobin 14 Gm %. Urine was strongly positive for bile but was otherwise normal. Serum bilirubin 14 mgm % (8 direct, 6 indirect). Alkaline phosphotase 13.8 Bodansky units. Prothrombin time 18 seconds, control 14 seconds. Cephalin flocculaon 3+ in 48 hours. Total serum protein 7.4 Gm % and A/G ratio 3.2/4.2. Hemagglutination for echinococcosis drawn 3-12-58 was reported positive in a dilution of 1/64,000, but this result was not available to us until about the 1st of April, 1958. Chest x-ray showed elevation of the diaphragms, but no evidence of metastases or active pulmonary disease.

Laparotomy done 3-3-58 revealed tremendous enlargement of the right lobe of the liver. The left lobe was gray, hard, nodular and slightly enlarged. The stomach, duodenum, pancreas and colon showed no evidence of tumor or prior surgery. The appendix was absent. It was the impression of the operator that the gall bladder was absent and that the gall bladder fossa had been peritonealized at the time of previous surgery. Both lobes of the liver were biopsied. Microscopic studies of this material revealed non-specific periportal inflammation and bile stasis in the right lobe. In the left lobe was seen necrosis and inflammatory infiltrate including lymphocytes, plasma cells and a few eosinophils and neutrophils. Following this pathology report it was considered that her disease was possibly due to **Echinococcus multilocularis,** but since the pathological findings had not been unequivocally reported as such and since we had not yet received the positive hemagglutination report, the diagnosis was still in doubt. She was reexplored on 3-21-58. The gall bladder was identified and found to contain stones. The common bile duct was explored and found to be normal. A prominent periductal lymph node was noted, however. The gall bladder was extremely friable and was therefore removed by morcellation. In so doing a large cavity in the liver, contiguous with the gall bladder, was entered. The cavity extended to the left and occupied virtually the entire left lobe of the liver. The cavity contained dark green liquid. A calculus found in the cavity was probably introduced there at the time of this surgery, though at the time its presence in the cavity was construed as evidence that the cavity had resulted as a complication of cholelithiasis. After evacuation of the cavity it was noted that the left lobe of the liver was small and softer than before. The cavity was packed with iodoform gauze and he abdomen was closed, leaving a penrose drain and a T-tube in place. The opening into the liver was on its inferior surface and hence did not lend itself to marsupialization at that time. The gauze packing was gradually removed over a period of several days. Post-operatively she developed pitting edema of the lower extremities while the upper extremities showed decreased tissue turgor. Serum sodium was 140 meq./liter and serum chloride only 88 meq./liter, and the edema of her lower extremities responded poorly to salt restriction and digitalization. These findings were considered suggestive of obstruction of the inferior vena cava. Her serum bilirubin continued to fall after removal of the T-tube three weeks postoperatively, and by 5-12-58 was only 6 mgm %. Recurrent hemorrhage occurred from a dilated vein at the site of her hepatic fistula. By this time further review of the biopsy specimens and the strongly positive hemagglutination test for echinococcosis had established the diagnosis of

hydatid disease of the liver. On 7-17-58 the cavity was widely unroofed and the skin margins sutured to the inner margins of the fistula. At this time large pieces of necrotic, sequestrated liver were removed from within the cavity. In the course of the procedure a loop of small bowel was injured, but the defect was easily repaired at the time. However, ten days following surgery she developed an enteric fistula at this site. She failed to make substantial improvement, and since no further surgery seemed feasible in this severely debilitated woman she was returned to the hospital in her native village, Kotzebue. The enteric fistula did not close and she expired 11-13-58. An autopsy was not performed.

CASE No. 3

M. O. was a 74-year-old Eskimo man from Point Hope. He was admitted to the Alaska Native Hospital, Anchorage, on 5-26-58 because of jaundice. He had also noted diminution in the calibre of stools and had noted excessive eructation. He denied use of alcohol. In the spring of 1958 he had noted exertional dyspnea which had disappeared without therapy.

Physical examination revealed a thin Eskimo man. He was deeply jaundiced but in no distress. The liver was just palpable.

Laboratory examination: WBC 9,300. Differential white blood count: neutrophils 67% (3 stabs); lymphocytes 29%; monocytes 4%. Hemoglobin 14.5 Gm. %. Urine was negative for urobilinogen. One stool was negative for occult blood and one was 4+ guaiac. Total serum bilirubin 22.5 mgm % (10 direct, 12.5 indirect). Alkaline phosphotase 9.6 Bodansky units. Prothrombin time 14 seconds, control 12 seconds. Cephalin flocculation 2+ in 48 hours. Total serum protein 10 gm% and A/G ratio 4.9/5.2. Chest x-ray showed fibrocalcific densities of both apices but no evidence of active disease. Upper G.I. series 5-28-58 was hampered by the patient's inability to cooperate due to language barrier but appeared to be negative. EKG of 5-26-58 was suggestive of septal and high lateral infarct, and a repeat EKG 6-13-58 showed regression of the changes, indicating that this infarct had been of fairly recent origin.

While awaiting completion of evaluation of his cardiovascular system the patient had a severe upper gastro-intestinal hemorrhage 6-14-58 manifested by hematemesis, melena, shock and a fall of his hemoglobin to 5.4 Gm %. At this time hepatomegaly was noted for the first time, the right lobe being palpable about three finger-breadths below the costal margin. He remained critical despite multiple blood transfusions. Exploration of the abdomen was done 6-17-58. At the time this was undertaken it was believed that the patient had a malignancy of the biliary tree, accounting for his jaundice, and that this lesion had ulcerated, thereby accounting for the hemorrhage. A hard lesion was found on the under surface of the right lobe of the liver which was thought to represent carcinoma of the gall bladder. Duodenostomy was done, failing to reveal a lesion of the duodenum or ampulla of Vater to account for his hemorrhage. The stomach felt normal and was not opened. A biopsy was done of the lesion on the under-surface of the right lobe of the liver and green bile flowed freely from this site. A fistula was created between this site and the second portion of the duodenum, using a segment of rubber catheter as a splint for the anastomosis. The patient expired a few hours after surgery from continuing upper G. I. hemorrhage.

At autopsy the liver weighed 1820 grams. The gall bladder was not identifiable. In the region of the gall bladder fossa there was a hard, gray lesion measuring 6.5 x 9 x 9 cm, extending down to and touching the right kidney. The lesion was cavitary and contained black liquid. The wall of this lesion was 5 mm. thick. The stomach contained about 500 cc blood and a deep ulcer measuring 2.2 x 1.7 cm was seen on the lesser curvature. A discrete 3 x 1 x 1.8 cm nodule was found in the lower lobe of the left lung. There appeared to be almost complete obstruction of the anterior descending coronary artery by an atherosclerotic process and the myocardium distal to this was yellow rather than pink.

Microscopic studies revealed "compartmented" echinococcus infestation of the liver, multiple echinococcus lesions of a similar "compartmented" pattern in the lungs, myocardial fibrosis, a benign gastric ulcer, arteriolarnephrosclerosis and cholemic nephrosis. The pathologist considered the pulmonary echinococcus lessions to be metastatic.

DISCUSSION OF THE CASES

These cases have been presented in considerable detail in the hope that the confusion experienced by us in following them may be appreciated and that thereby both we and our readers

might be spared such confusion when confronted by similar complexities in patients with **Echinococcus multilocularis** infections of the liver. The clinical and gross surgical findings in all three were highly suggestive of far-advanced malignant neoplastic disease involving the liver. Microscopically a granulomatous, necrotic process was seen which was suggestive of tuberculosis. The laboratory findings indicated both hepatocellular damage and biliary obstruction. Among

Figure 1. Unilocular cyst of **E. granulosus**, occuring in lung.

parasitic diseases, the elevation of total serum protein due to increased globulin and normal albumin levels is, so far as we are aware, peculiar to the cases described herein. Lack of eosinophilia in two of the three cases is noteworthy. Lack of calcification in the involved portions of the liver is also striking, inasmuch as we and others have at times made tentative diagnosis of visceral hydatid disease on the basis of such calcification seen in roentgenograms. The hemagglutination test for echinococcus disease was diagnostic in the two cases in which it was used. It deserves further study and clinical trial to assess its reliability.

The malignant character of **E. multilocularis** infections of the liver is clearly seen in the cases presented. One of the patients died of hemorrhage from a gastric ulcer. However, because of biliary obstruction caused by the parasitic infection and the pulmonary metastases of the parasites, it is doubtful that his prognosis could have been substantially improved even if the gastric ulcer had been recognized and correctly treated. The necrotizing effect of the parasite on the liver

Figure 2. Microscopic section of **E. multilocularis** infection in liver.

was most clearly seen in case No. 2, who apparently died of liver failure despite having the lesion marsupialized. We have not personally been able to render good surgical therapy for this condition. In the absence of an effective drug to control this disease a proper surgical procedure would be desirable. Marsupialization of the lesion would not seem to be a proper procedure since it only removes the necrotic and non-viable portion of the parasitic nest, doing nothing to abolish or even diminish the exogenous budding of the parasites at their point of contact with host tissues. Therefore, after marsupialization, it would still be possible for invasion of host tissues, or

even hematogenous metastasis to occur. Marsupialization of an alveolar hydatid lesion might be comparable to incision and drainage of a localized bacterial infection. However, it seems to us to have more similarity to marsupialization of a malignant neoplastic process, giving no promise of cure and only limited hope for palliation. A total resection of the diseased area would be more desirable, if feasible.

We do not mean to imply that these multilocular infections of the liver are equally malignant in all persons. We have seen patients in whom hepatic lesions were partially removed or biopsied 10 or 12 years earlier and who showed little or no evidence of progression of the disease when we observed the lesion in the course of some other, unrelated abdominal operation. The fact that there may be a difference in host-susceptibility or parasite-virulence makes difficult the decision for or against such a formidable procedure as a major hepatic resection when alveolar echinococcus infection of the liver is encountered. For purposes of planning therapy one is tempted to draw parallels with management of malignant neoplastic disease. We are not certain that our knowledge of the disease is great enough, or our experience sufficient to justify such conclusions at this time. Therefore we will continue to search for answers to these problems.

In other parts of the world, also, there has been little success in treating alveolar hydatid disease of the liver. Semenov (1954; cited in Rausch, 1959)[4] reviewed 152 cases treated by surgeons in the Soviet Union. Of these, 108 were inoperable, 21 terminated fatally after surgery, and only 12 were considered to have been cured. In an additional 65 cases treated personally by Semenov, only 15 recovered. Dardel (1927)[1], in Switzerland, reported comparable success for 102 cases considered by him.

SUMMARY

We have reviewed recent studies on echinococcus parasites, pointing out the features which distinguish **E. multilocularis** from the better known **E. granulosus.** Differences are seen in: morphology of adults and larvae; manner of larval budding; epidemiology; and host-specificity of the larvae. Three cases of alveolar hydatid infection of the liver are presented, illustrating the clinical features of the disease.

In some ways this disease is very similar to malignant neoplastic disease. **E. Multilocularis** larvae have a capacity for invasion of host tissues and for metastasizing, presumably by the hematogenous route. Speculation is made regarding the therapeutic implications of the biologic characteristics of **E. multilocularis** infections in man. However, our knowledge is still too limited to warrant any firm conclusions as to treatment.

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BIBLIOGRAPHY

Dardel, G. Das Blasenwurmleiden in der Schweiz, speziell seine Verbreitung beim Mensch und Vieh das Verhaeltnis von **Echinococcus alveolaris** zu **hydatidosus.** Geographische, experimentelle und klinische Studie . . . (mit Vorwort von Prof. A. Posselt). VI, Bern. 1927.

Faust, E. C. and Russel, P. F. **Craig and Faust's Clinical Parasitology.** (Sixth edition) Lea & Febiger, Philadelphia, 1957.

Rausch, R. Studies on the helminth fauna of Alaska. XXX. The occurrence of **Echinococcus multilocularis,** Leuckart, 1963, on the mainland of Alaska. Am. J. Trop. Med. Hyg. 5:1086,1956.

Rausch, R. **Echinococcus multilocularis** infection. Proc. 6th Internat. Cong. Trop. Med. Malaria. Lisbon. (In press).

Rausch, R. and V. L. Jentoft. Studies on the helminth fauna of Alaska. XXXI. Observations on the propagation of the larval **Echinococcus multilocularis** Leuckart, 1863, **in vitro.** J. Parasit. 43:1, 1957.

Vogel, H. Ueber den Echinococcus multilocularis Sueddeutschlands. I. Das Bandwurmstadium von Staemmen menschlicher and tierischer Herkunft. Z. Tropenmed. u. Parasit. 8:404, 1957.

JAUNDICE IN A 10 WEEK OLD CHILD

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The following case is presented to emphasize the problem of determining the etiology of jaundice in infancy.

A ten-week-old male Indian from Yakutat was referred to the Alaska Native Health Service in Juneau on October 18, 1959, because of jaundice.

The mother's prenatal course was complicated only by chronic rheumatic heart disease. There was no jaundice or other illness. Her serology in June, 1959, was negative; blood type "0", Rh positive. Delivery was uneventful; birth weight 7 pounds, 10 ounces. The child had no symptoms or illness other than jaundice prior to admission.

Physical examination on admission revealed a well developed and well nourished child with marked icterus. He was afebrile. There was moderate distention of the superficial abdominal veins. The liver edge was felt 4 cm. below the right costal margin. On one occasion the spleen was palpated. There was no remarkable adenopathy or other evidence of infection.

Hgb. 10 gm %; Hct, 28.5%; RBC 3.7 million per cu. mm.; WBC 9,050 per cu. mm.; 20% neutrophils, 1% band, 79% lymphocytes. Urinalysis unremarkable. Stool obtained directly from the rectum contained no bile.

	Oct. 19	Oct. 20	Oct. 21	Oct. 23	Nov. 5
Bilirubin	5.8	6.9		5.3	1.7
Direct	4.6	4.3		3.9	0.7
Indirect	1.2	2.6		1.4	1.0
Icteric Index		63.		27.8	13.2
Transaminase (SGOT)			480 units		
Prothrombin Time				30%	

On October 26, using oral alcohol and local infiltration with 0.5% Metycaine, the abdomen was opened through a small incision. A normal

appearing gall bladder and liver were exposed. A wedge biopsy of the liver was obtained. Crying and straining by the child prevented re-exposure of the gall bladder for aspiration of bile or for a cholangiogram.

Microscopic diagnosis of the liver biopsy was: "classic features of giant cell or neonatal hepatitis." Attempts at oral and intravenous cholangiograms were unsuccessful. Post-operatively the child did well. His jaundice regressed gradually.

DISCUSSION

Jaundice is due to excessive destruction of red cells, damaged liver cells or obstruction of the biliary ducts. This child was beyond the age of "physiological jaundice" of the newborn and maternal blood incompatability would have manifested itself before this age. Non-hepatic infection can cause jaundice but there was no adenopathy, fever, elevation in white blood cell count or

suggestion of osteomyelitis by X-ray. The mother's serology was negative.

Hepatitis is being recognized with increasing frequency at this age[1,2].

The most common cause of biliary obstruction in infancy is biliary atresia[3]. Biliary obstruction is rarely due to enlarged lymph nodes in the gastro-hepatic ligament, choledochal cyst, annular pancreas or carcinoma of the pancreas[8]. Many cases of so-called "inspissated bile" have been proved to be hepatitis[1].

There is no clinical sign or laboratory test which will distinguish hepatitis from biliary atresia. Cephalin flocculation and thymol turbidity, which reflect changes in gamma globulin, are not reliable in infants of this age who normally have a low gamma globulin. Serum glutamic oxaloacetic transaminase is elevated in both hepatitis and biliary atresia, averaging higher in hepatitis [4,5,6]. It is not surprising that attempts to opacify the extra-hepatic biliary system with oral or intravenous dye were unsuccessful[7].

It is important to make the diagnosis early. If biliary atresia is present, attempt at surgical repair should be undertaken before irreversible damage occurs. On the other hand, subjecting a child with hepatitis to prolonged anesthesia and to surgical trauma can be lethal [1]. A liver biopsy will usually allow the pathologist to make the diagnosis with certainty. Occasionally a percutaneous needle biopsy is adequate [9]. A small abdominal incision under local anesthesia allows for a more adequate biopsy. If a gall bladder is found a tube can be inserted for a direct cholangiogram [10]. The risk of general anesthesia is to be avoided.

SUMMARY

A ten week old infant with jaundice is presented. The major causes of jaundice at this age are hepatitis and biliary atresia. The only reliable and safe method of establishing the diagnosis is by liver biopsy under local anesthesia and direct cholangiography.

BIBLIGRAPHY

1. Gellis, S. S., Craig, J. M., and Hsia, D. Y. Y. Prolonged Obstructive Jaundice in Infancy. A. M. A. J. Dis. Child. 88:285,1954.
2. Capps, R. B., Bennett, A. M., Mills, E. H., Ettinger, R. H., Drake, M. E., and Stokes, J., Jr. Infectious Hepatitis in Infants and Small Children. A. M. A. J. Dis. Child. 89:1,1955.
3. Gross, R. E. The Surgery of Infancy and Childhood. W. B. Saunders Company, 1953.
4. Kove, S., Goldstein, S., and Wroblewski, F. Transaminase Activity in Neonatal Period. J. A. M. A. 168 860,1958.
5. Stanton, R. E., and Joos, H. A. Gutamic-Oxalacetic Transaminase of Serum in Infancy and Childhood. Periatrics 24:362, 1959.
6. Schneider, A. J., and Mosley, J. W. Studies of Variations of Glutamic-Oxalacetic Transaminase in Serum in Infectious Hepatitis. Pediatrics 24:367,1959.
7. Reichelderfer, T. E., and Hartesveldt, J. V. Intravenous Cholecystography with Cholografin in Infants. A. M. A. J. Dis. Child. 89:591,1955.
8. Warthen, R. O., Sanford, M. C., and Rice, E. C. Primary Malignant Tumor of the Pancreas in a Fifteen Month Old Boy. A. M. A. J. Dis. Child. 83:663,1952.
9. Kaye, R., Koop, C. E., Wagner, B. M., Picou, D., and Yakovac, W. C. Needle Biopsy of the Liver as an Aid in Differential Diagnosis of Prolonged Jaundice in Infancy. To be published.
10. Clatworthy, H. W., Jr. and McDonald, V. G., Jr. The Diagnostic Laparotomy in Obstructive Jaundice in Infants. S. Clin. North America 36:1545,1956.

THE SCARRED CORNEAS OF ALASKA

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ANCHORAGE

In January, 1940, on a blue cloudless day I arrived in Ketchikan, Alaska, just out of an EENT Residency at Duke University Hospital. My wife and I arrived aboard the S.S. Baranof of the Alaska Steamship Co. with six dollars, a 9-year-old Chevrolet roadster, and the promise of a job as the associate of two stalwart general practitioners, Drs. A. N. Wilson and H. C. Turner.

In those days the Alaska Health Department was a part-time effort more or less carried in the pocket of Dr. W. W. Council, the first Commissioner of Health, who told me when I was taking the Alaska Territorial Medical Examinations that there was something wrong with the natives' eyes —cataracts or the effects of snow blindness. Most of them too, he said, had draining ears, and practically all of them had some form of tuberculosis.

In practice only a few weeks with my two kindly seniors, who were as wise and kind as I was brash and inexperienced, I found that the "cataracts" were corneal scars and that "running ears" represented cases, hundreds of cases, of mastoiditis.

It did not take long to establish that the corneal scars were due to phlyctenular keratoconjunctivitis, an allergic response of the cornea to suppuration elsewhere in the body. The tubercle bacillus was of course suspected in the lungs or the bones and joints. But 10 years later in 1950, working in association with Dr. Phillips Thygeson of the University of California, we found that the latent focus was non-tuberculous, most likely staphylococcic, in cases of suppuration of the middle ear and the annual spring crop of impetigo.

In 1940, after 17 months of private practice, I went on a year of active duty with the U. S. Air Force in Alaska. By virtue of itinerant experience in EENT enjoyed during my residency in North Carolina and at Craig, Klawock, Metlakatla, Petersburg, Wrangell, Hydaburg and Kake in Alaska, I was soon en route to all the military outposts in Alaska as EENT emissary for my revered commanding officer, Colonel Duther R. Moore.

Though my primary duty lay with the troops, I had the opportunity of examining hundreds of natives who pathetically sought help from any kind of doctor who happened along, mostly for painfully abscessed teeth, far-advanced pulmonary tuberculosis, running ears, poor vision, and orthopedic problems. I was appalled at the number of youngsters deaf from mastoiditis and blind from the corneal scars caused by repeated attacks of phlyctenulosis, or PKC as we began to call it.

Back in the States on terminal leave in 1946 I received a fellowship from the Eye Bank for

Sight Restoration, Inc., and learned to do corneal grafts. In 1947, at the invitation of Alaska's first full-time commissioner of health and a war-time friend, I spent six weeks in the Arctic, a fugitive from New York city private practice, roaming the lovely flower-bedecked Arctic. My mission was determining for Dr. C. E. Albrecht the causes of blindness among the natives of Alaska. Among the over 600 natives fully examined was a 37-year-old Mrs. D. A., then living in a small village near Anchorage. Her vision was very poor due to dense, central corneal scars. She was a brave and handsome woman and I promised that I would do a graft on her eyes if I came back to Alaska. Returning to Anchorage in 1948 I established a private practice and frequently saw Mrs. D. A. and her two children, M. and D., both in the active stages of PKC.

In May, 1948, at Kotzebue, I found M., a 15-year-old schoolgirl with putrid mastoiditis on one side and both eyes unseeing from corneal opacities due to PKC. Vision was 20/300 in each eye. Dr. J. H. T. Rambo of New York was with me. We had E. sent to Anchorage where we were successful in curing the mastoiditis and then had her wait until a useful eye came along for a corneal transplant. Through the cooperation of Dr. R. C. Clark of the U. S. Air Force we received a fresh and useful eye and did the first corneal graft in Alaska in November, 1958. Vision in the operated eye improved to 20/70. The graft is peripherally opaque but the patient is happy with that much improvement. And the graft may be done again if it should cloud over further.

Meanwhile Northwest Airlines established Flight 99 non-stop from New York. I communicated this intelligence to the New York Bank of which the Eye Bank of the Eye, Ear, Nose, and Throat Foundation of Alaska, Inc., is an affiliate. Mrs. A. Carl Competello, Director of the New York Eye Bank, promised to send the next available eye and Mrs. D. A., the patient of 1947, was alerted at her job in the bakery of the Anchorage USPHS Hospital. She had heard of E's successful operation and was eagerly awaiting her surgery.

Finally a phone call from New York notified us that an eye was on the way and on a Saturday morning in October, 1959, we did a 7 mm full thickness graft using a trephine donated by Dr. R. T. Paton of New York. We used 11 direct edge-to-edge sutures of 7-0 Ethicon braided silk.

The operation, done 12 years after it was promised, went well since I was ably assisted by Dr. M. J. Shoff of the USPHS and my own surgical nurse, Mrs. Levia Childs. Sutures were removed on the 9th day and 18 days later the lady was back at work with a clear graft and uncorrected vision of 20/70 from 20/300 pre-operative.

Public interest, thanks to the papers, radio and television, was high, and we received two eyes from local residents a few days ago. One was used on a 21-year-old young lady promised the operation eight years ago, and the second three days ago on a lady of 29 who had been waiting for her operation since 1955. Both operations went well and we hope that it will become as commonplace—and as successful—as the operations upon patients with mastoiditis. If we can sign up 10,000 members for our Eye Bank we are assured of at least one eye a week. These we need if we are to rehabilitate the 84 Alaska patients (native and non-native alike) who are blind because of their badly scarred corneas.

We have a model Eye Bank law passed by the Territorial Legislature in 1953 without a dissenting vote largely through the efforts of two interested private citizens. We have scores of patients. We have the hospitals, the surgeons, the instruments and the suture materials. What we need is eyes and we hope that all physicians and their patients will join the Eye Bank of the Eye, Ear, Nose and Throat Foundation of Alaska, Inc., Box 808, Anchorage.

TUNDRA PRACTICE: PRESENT AND FUTURE

HARRIET JACKSON, M.D.

BETHEL

The vast, tundra-covered expanse of Alaska north of the Alaska Peninsula and west of the Alaska Range has, over the years, remained largely the domain of the Eskimos. What medical services have been available have been provided by the government, by missions, or by happenstance.

In the last few years in the small corner of western Alaska with which I am acquainted (an area the size of the state of Kansas) there has developed an increasing population who are not eligible for government care. Also, there are natives who are interested in obtaining private care. The reasons they give include the following: not having to wait so long to be seen, knowing that the same doctor will see them and not another one, and the distance of the hospital from town.

Bethel, a fourth-class city of about 1200 is the center, transportation-wise and to a large extent otherwise, of this Kansas-sized area which contains about 10,000 people, 90% of whom would be eligible for care through the Alaska Native Health Service. In July, 1959, the first private practice was started in the area. Practice in this part of the country has certain peculiarities which seem to make it impressively different to many outsiders. Perhaps some of these peculiarities are worth mentioning along with comments on the long-range needs.

TRANSPORTATION

No two of the approximately 50 villages within 150 miles of Bethel are connected by road. There are only a few air strips. Urgent transportation is by float plane or ski plane. The common forms of transportation continue to be outboard motor boats and dog teams. One less common but interesting mode of travel is by snowplane, essentially a ski plane without wings, utilizing a pusher-type propeller. Road building across the tundra will be a tremendous, though not impossible, job. Perhaps one of the new types of vehicles which propel themselves along just above the ground and water will revolutionize transportation so that patients and help can get together despite weather and darkness.

COMMUNICATIONS

Though Bethel now has phone connections with the outside world, thanks to the White Alice System, the surrounding towns can get in touch with Bethel only by radio, which is subject to "fits" of poor reception. You may get a call via one or two relaying stations that an almost bedfast, aged man wants you to come to see him 40 miles away. Thanks to the bush pilots this is usually possible, but inevitablely you take lots of things you don't need and often leave behind

the medication you later wish you had taken. Hopefully, some better means of communication is forthcoming which will not be so subject to meteorologic and sun spot phenomena.

HOSPITALS AND PHYSICIANS

There is a good 60-bed hospital in Bethel, operated by the Alaska Native Health Service, but for the private patient the nearest hospital and consultant is in Anchorage, 400 miles away, by a $60 one-way plane trip involving altitudes of usually 12,000 feet or more. Fairbanks, almost the same distance away from Bethel as Anchorage, is more difficult to reach by regular scheduled transportation, but can be reached by small plane without climbing to significant altitudes if the weather happens to be good and the pocketbook bulging.

The Bethel hospital staff can and does assist these patients in emergencies, but rather than try to duplicate expensive equipment in outlying areas such as this for the non-government beneficiary, it would seem economical and wise to make arrangements for the hospitals to be available for the use of private patients for non-emergency care. Arrangements regarding fees could be made in a realistic manner so that the tax burden would not increase. This situation in various forms does or will undoubtedly exist in such places as Dillingham, Kotzebue, Barrow, and Tanana.

PREVENTIVE MEDICINE

If you look at it in a certain light, my duties as mayor (a position I was elected to this fall) may be considered largely the practice of preventive medicine, both communicable disease and mental health aspects. The city council's chief interests at the moment are a safe water supply, waste disposal, loose dog control and rabies vaccination, and prevention of drunken and disorderly conduct. Dog control is the easiest to tackle, but the water and waste problems get complicated by the 420 feet of permafrost under the town. Neither I nor the other physician on the council remember being properly prepared in medical school for these sanitation problems, perhaps it was because we went to school in large Eastern and Southern cities.

If mercury and oil prospects are developed on this side of the Alaska Range, no doubt there will be need for other private practitioners in the area. They will find, I'm sure, plenty of use for their training and imaginations, but whether the hoped for mineral developments go through or not some of the problems discussed above need attention if the standards of health and medical care of the non-native on the tundra are to be improved.

Woman's Auxiliary News

A news column compiled by

Mrs. Vernon Cates

PRESIDENT'S MESSAGE

To Alaska Medical Wives:

You will read in this issue of ALASKA MEDICINE, Mrs. Fitzpatrick's report of her attendance at this conference in Chicago, October 5th thru 7th. The attention and interest, friendliness and helpfulness offered there should engender in us a sense of responsibility as a state organization.

There are still too many eligible doctor's wives in Alaska who do not belong to the Woman's Auxiliary to the Alaska State Medical Association. We can accomplish our aims only if we have your assistance. We need each doctor's wife's help in supporting A.M.E.F., in defeating the Forand bill, and in accomplishing individually in her own community, progress for better health.

If you are a member, won't you make your self responsible for just one new member this year? If you are not a member just send in your name and address with $5.00 dues to the Secretary-Treasurer of the Woman's Auxiliary to the Alaska State Medical Association, Mrs. Charles St. John, 2106 Lord Baranof, Anchorage, Alaska.

Every state is working this year to increase its membership. Alaska can achieve 100% membership! Shall this be your goal?

Mrs. Francis Phillips is president Woman's Auxiliary to the Alaska State Medical Association. At the National Woman's Medical Auxiliary Conference held in June of this year, it was agreed to make funds available to a delegate from each of the two new States to attend the Conference of Presidents and Delegates to be held in Chicago in October. A sum of $250.00 was allocated for each state's delegate to help defray expenses.

Inasmuch as the State Auxiliary officers were unable to attend the conference, Mrs. Marjorie Fitzpatrick, Anchorage Auxiliary President, was appointed Delegate to represent Alaska in Chicago. ●

Mrs. Francis Phillips

SIXTEENTH ANNUAL CONFERENCE OF THE WOMAN'S AUXILIARY TO THE AMERICAN MEDICAL ASSOCIATION

(A report by Marjorie G. Fitzpatrick, President, Anchorage Medical Auxiliary, who represented the Woman's Auxiliary to the Alaska State Medical Association.)

Sixteenth Annual Conference of the Woman's Auxiliary to the American Medical Association was held at the Drake Hotel, Chicago, Illinois, October 5-7, 1959. This was a conference of State Presidents and Presidents-Elect, and National Officers and Chairmen. The theme for the conference was "Opportunities for Service to the Community."

The conference was called to order by the President of the Women's Auxiliary, Mrs. Frank Gastineau. Roll call was conducted by Mrs. Harold Gay of Michigan, and when Alaska responded with a delegate, the crystal chandelier of the Grand Ballroom was in danger of falling from the thunderous applause. I was requested to come forward for the official introduction and "please make a small speech." I offered the greetings of the Alaska Medical Association, the Woman's Auxiliary and our State President, then presented Mrs. Gastineau with an ivory bilikin, a gift from the Alaska Medical Auxiliary. Our bilikin will reign supreme in the newly remodeled offices of Auxiliary Headquarters in Chicago. Following the recognition of your Alaska delegate, the same wonderful treatment was accorded the Hawaiian delegate.

Fortunately, I had thought to take a good sized Alaska flag and the 49-star flag with me, which I planted firmly in front of me at my table and which created quite a sensation and many requests for the meaning of the flag.

After the roll call was completed, we all settled down to two and one-half days of work. The greeting from the A.M.A. came from Mr. Thomas Hedricks, who stated that "the doctor's wife is the keystone of the arch" of medical public relations.

A two-act play was presented called "Ladies in the Lobby," regarding the Forand Bill or H. R. 4700, which I have discussed in another article (see page 128, Editorial Section, this issue). Act One, entitled "The Ladies Louse It Up," showed the wrong way to approach your elected officials. The second act, "The Women Work Wonders," showed the correct way to discuss this controversial bill which is being considered by the House Ways and Means Committee. A great deal of attention was focused on this Forand Bill during the entire conference. I was surprised to learn that the American Nurses Association has gone on record as being in favor of this bill, and we all felt

that we, as doctor's wives, have missed the boat, so to speak, in keeping up good relations with our local nursing organizations, either as active members if we are nurses or as interested women if we are not nurses.

The AMEF was discussed and explained, and we were reminded that the main purpose of the A.M.A. has been and is to support medical education. The Auxiliaries were reminded that, before any other project, we should support the AMEF. Mrs. Gastineau was presented with a beautiful 1810 silver tureen for her work on behalf of the AMEF. This she has graciously donated to National Headquarters and it is to be awarded each year to the state which raises the most money for the AMEF. Mr. John Hedback, Executive Secretary, AMEF, asked me to thank all of our Auxiliary members for their excellent showing in supporting the AMEF last year. Let us try to top our donation this year and win the right to display this silver trophy in our own state for a year.

The "Membership Sales Promotion Meeting" was excellent and was concerned with selling the Auxiliary to the Medical Society, to the doctors' wives, and to the potential market such as: the doctor's wife who is new to the community, the member-at-large (which answered the problem of our own State Auxiliary with all of us so scattered), the Student American Medical Association member, the doctor's wife who prefers other organizations, and finally, how to keep the "customer" satisfied. We were reminded, not of the old adage that "the early bird gets the worm," but that we must be "the fustest with the mostest" in order to get and hold members who might become involved with other organizations or drop out of the Auxiliary while our membership committee is dragging its heels.

We started our Tuesday meetings with Regional Membership breakfasts and Alaska was included in the Western region. Many problems peculiar to Western States were discussed, not all pertinent to Alaska, but the problem of distance between towns and cities. and Auxiliary members, was shared by all of us. It was suggested that, in order to keep our members in outlying areas in closer contact with us, the President and President-Elect write personal letters to these members and that we have periodic news letters go out from our State officers. The suggestion was also made that these scattered and isolated members become "members-at-large" and participate in projects being held in the closest city or town by sewing for bazaars, making Christmas cakes or cookies that could be mailed, this again keeping the "member-at-large" in closer contact with other Auxiliaries and members.

Following the regional breakfast, the entire delegation was called to order. Under "Community Service Implementation," Mr. George Cooley discussed the A.M.A. Program for the Aging. Many regional conferences are being held, under the auspices of the A.M.A. on "Caring for the Aged" and all Auxiliary members were invited to attend these conferences. A positive approach to Mental Health was given by Dr. Hugh Carmichael, and Dr. Irving Sunshine spoke on the Safety Program in the home. Dr. Sunshine is Technical Director of the Cleveland Academy of Medicine Poison Information Center and has safety slides and manuscripts available for loan to states desiring to work on a safety program.

The next item on the program was Paramedical Careers Recruitment but was, perhaps, more pertinent for states with schools and colleges for training in the medical and allied fields than for Alaska. However, one interesting point is that National Foundation Health Scholarships are available to each state and each state can be allocated five such scholarships. This would be something for us to look into since these scholarships are available in Nursing, Occupational Therapy, Physical, Medical Social Work and Medicine.

The Oklahoma delegates were most interested in Alaska and informed me that their two-day State Convention would feature an "Alaska Day" and "Aloha Hawaii Day," the latter part of October. I turned over to the delegates several Alaska magazines, Alaska flags and Bilikin key chains (which I took as gifts for the other state delegates after consultation with our State President), the words to our state song, "Alaska's Flag," and the history of the Alaska flag. All of these things were to be displayed at their convention the 26th and 27th of October.

Wednesday we were shown a film produced for the A.M.A., entitled "I Am a Doctor." The film may be borrowed from the A.M.A. to be shown in local high schools to students interested in medicine as a career. The suggestion was made that a local physician be on hand to answer any questions that might come up after the showing.

The final hour of the conference was listed as a "Clinic for Auxiliary Problems" and consisted of a series of questions asked of a panel of National Committee Chairmen. Most of the questions were regarding the material that had been covered during the conference and were reaffirmations of previous answers given.

I came away from this conference. not only with my head spinning, but wondering how we can increase our State and local Auxiliary memberships and how we can better sell the Auxiliary as a service organization rather than a "social" club. If we are to abide by the Constitution and By-Laws of the National Auxiliary. then we must continue to grow and expand as a service organization. Not only must we cultivate friendly relations and promote mutual understanding among M.D. wives, but we must also support the A.M.A. in its programs for the advancement of medicine and good public health, the AMEF in its program to improve and expand medical education and still accept the aim of the Woman's Auxiliary of "better health through community service." We must remember that "by our deeds are our husbands judged." Let us by all means be community minded but let us also reach out and support the aims and ideals of the American Medical Association to which we are the Woman's Auxiliary.

LOCAL AUXILIARY NEWS

Anchorage

The Anchorage Medical Auxiliary has had two enthusiastic meetings this fall heretofore. A sum of $245.00 was cleared on a rummage sale held in October. A toy and jewelry party was held November 12th, and a gift wrapping class is to be combined with a late November meeting. Plans are under way for the annual Christmas Bazaar which is to be held on December 5th.

Some members have been working on Bazaar items for the past year.

Thus far we have agreed to donate funds to the local hospital fund and to A.M.E.F. and have pledged our assistance to other organizations.

Fairbanks

The Fairbanks Auxiliary has had two meetings this fall. We hold our meetings on the second Friday of the month at the same time our husbands hold their monthly meeting. We enjoy dinner along with our husbands in a private dining room at Travelers Inn. After dinner the women retire to a corner of the public dining room for after dinner coffee and their meeting while the doctors conduct their business in the private dining room. This arrangement seems to be working out the best for us.

Our next project in Fairbanks will be an A.M.E.F. dinner to be given sometime after Christmas, but before the State Convention in Anchorage. The definite date will soon be set. The dinner will be held at the home of Dr. and Mrs. Joseph Ribar. As an added attraction for the evening, we will be shown pictures by Dr. and Mrs. Schaible of their trip to Africa last year. We are looking forward to a pleasant evening and a nice sum to be added to the A.M.E.F. fund.

This summer we had a barbecue, for the A.M.E.F., at the home of Dr. and Mrs. Fate. As a result of this, the Fairbanks Auxiliary deposited $65.00 in the State Auxiliary Account for the A.M.E.F. ●

CHIT CHAT

ANCHORAGE—Dr. and Mrs. C. E. Chenoweth have returned from an extended trip to visit family members in Iowa. Their daughter is in charge of a special training school for handicapped children there.

The Drs. Richard Chao welcomed their third daughter in August.

Dr. and Mrs. Rodman Wilson recently flew the polar route to Copenhagen, Denmark. They plan to spend some time in Madrid and then a flight to Baltimore to visit Mrs. Wilson's father will complete their vacation.

Dr. A. Claire Renn spent a recent and most enjoyable vacation in Hawaii.

Dr. and Mrs. Michael Beirne are parents of a new son, Mark, born in Anchorage recently.

Drs. John and Betsy Tower flew to Haines recently where Dr. Betsy is on the board of Haines House, this being an in-patient house for Eskimo and Indian children. Upon leaving Haines they were able to fly as far as Burwash Landing but clouds then forced them to return. The following day, after another departure, they were again forced to return to the field because of water in the fuel. Dr. John then returned to Anchorage flying alone—reporting good service at both Snag and Northway. Dr. Betsy returned by car!

Dr. Edwin Kraft, a one-time commercial airlines pilot, recently flew his own plane along the coast from San Francisco to Juneau.

Miss June Green, originally from London, England, and Dr. Glen Crawford of Anchorage were married recently.

FAIRBANKS—With regard to "Paramedical Career Recruitment," Mrs. Paul Haggland, serving as a chairman for local Business and Professional Women's Club and in connection with Rotary and Soroptimist Clubs, has been working with schools on career advancement including the various branches of "Paramedical."

Dr. Haggland spent some time with his twin sons recently, one being in pre-medicine at the University of Washington and the other studying pre-medicine at the University of Oregon.

"Fairbanks' loss is Uncle Sam's gain." Dr. and Mrs. Kenneth Kaisch have left Alaska and Dr. Kaisch has rejoined the army.

HAINES—Dr. and Mrs. Phillip Jones have been living in Haines fourteen months following a two-year tour of duty with the Air Force at Elmendorf. Dr. Jones has his private practice there and also is the physician for Haines House.

HOMER — A new daughter, Heidi, joins brother Eric in the family of Dr. and Mrs. John Fenger.

JUNEAU — Mrs. Harry Gibson suffered a fractured pelvis and head injuries as the result of a fall while visiting her daughter in Sacramento. After several weeks of hospitalization in that city, she is now recuperating satisfactorily at her daughter's home.

MT. EDGECUMBE — Mrs. David Sparling accompanied her husband to Chicago in October to the American Academy of Pediatrics, held at the Palmer House. Mrs. Sparling then visited her parents in Illinois.

SEWARD—Mrs. Joseph Deisher is working with and helping to reorganize the Health Council of Seward. ●

Muktuk Morsels

A column devoted to medical news in Alaska, compiled by

HELEN S. WHALEY, M.D.

GENERAL

Smith Kline & French, "March of Medicine"

A televised view of the unique practice of medicine in the Far North is scheduled for nationwide presentation sometime during the early spring of 1960. In cooperation with the Alaska Department of Health and the United States Public Health Service's Alaska Native Health program, Smith, Kline and French will televise an orthopedic clinic in Bethel on December 9th, 10th, and 11th. Dr. William J. Mills, orthopedic consultant for the Alaska Department of Health, will head this team. The tentative program outlined is to include views of Bethel, the hospital, and some of the outlying villages. It is planned to include several sequences of the famed medical broadcasts during which school teachers, chemotherapy aids, ministers, etc., in isolated villages call into the Bethel hospital for medical advice for sick village patients. An actual series of orthopedic clinic scenes will be filmed, including the examinations, fitting of braces, and the taking of a history and the explaining of special exercises to the patient and his family often with the help of a native interpreter. The various modes of patient transportation used during the winter, including the bush pilot, and the dog drawn sled, which uses the frozen Kuskokwim River as a highway, will be shown.

Three Communities are Without Physicians:

At the present time there are three communities in Alaska without the services of a physician. Skagway, in Southeastern Alaska, has a population of approximately 700 permanent residents. Dr. William R. Coleman, who has practiced in Skagway since April, 1958, has moved to Fairbanks and will join Dr. Henry Storrs of that community in practice. At present Dr. Phillip Jones of Haines is flying to Skagway several times a week. Physicians interested in this community may contact the White Pass and Yukon Railway Hospital at Skagway.

Wrangell, a fishing community in Southeastern Alaska is still without the services of a permanent physician since the departure of Dr. John Bangeman. Sitka physicians have provided interim medical care.

As mentioned in an editorial in the last issue, Valdez, a tourist community of approximately 500 persons, has been without the services of a permanent physician for several years.

LOCAL NEWS

FAIRBANKS: Fairbanks physicians continue to participate in a number of community activities. Dr. Paul Haggland, who attended an orthopedic meeting recently in Denver, has one year to complete as mayor of the community. During the recent elections, Dr. Joseph Ribar became a member of the City Council. Dr. James A. Lundquist is completing his last year as treasurer of the School Board. He and Dr. Lawrence Dunlap will be moving into a new clinic office building shortly ater the first of the year and will be joined by Dr. Jim Dunlap this coming summer, who is completing a surgery residency at the Good Samaritan Hospital in Portland, Oregon. Dr. Lawrence Dunlap is serving as the interim president of the staff at St. Joseph's Hospital since the departure of Dr. Kenneth Kaisch. Fairbanks representative at the Heart Association postgraduate course at the University of Washington in Seattle was Dr. Joseph Ribar. Dr. Henry Storrs attended the American College of Surgeons meeting in Atlantic City in September.

After many years of E.E.N.T. practice, Dr. Hugh Fate is retiring. He is the only physician in this specialty north of Anchorage, and has cared for patients from Fairbanks to Point Barrow and from Fort Yukon to the Bering Sea. In addition to his private practice, he has served as the consultant for all of the Alaska Department of Health E.E.N.T. programs. In 1958, he was president of the Territorial Medical Association.

BETHEL: In the recent city elections Dr. Harriet Jackson became the mayor and Dr. Jean Persons, secretary, of the Bethel City Council.

Their problems include such public health measures as obtaining an adequate safe water supply and finding ways of promoting safe garbage and sewage disposal. These present major problems in many Arctic communities because of the permafrost. For a number of years the Arctic Health Research Center with headquarters in Anchorage, has been studying more feasible methods of dealing with these problems in the Far North, and have concentrated on the Bethel area because of the relatively dense population.

Dr. George Wagnon attended a meeting of all of the medical officers in charge of the various field hospitals of the Alaska Native Service in early October in Anchorage. He was accompanied by his wife, who took advantage of the trip to take her private pilot's test, so that she can join her husband as a private pilot.

SEWARD: The daily census at the Seward Sanitarium has doubled during the past year, according to Dr. Ernest Gentles from 17 to approximately 37 patients. Part of this marked increase has been due to increased case finding of active pulmonary tuberculosis among the white population. All native tuberculosis patients are hospitalized at the United States Public Health Service facilities. However, the Sanitarium has also admitted patients with other chronic pulmonary diseases such as emphysema and more recently, patients with chronic diseases such as cancer.

Because of the scarcity of available patient beds at Providence Hospital in Anchorage, a number of patients requiring long-term-hospitalization have been transferred to the Seward General Hospital in recent months.

Dr. Paul Isaak has joined the rapidly growing ranks of Alaskan private pilots.

ANCHORAGE: Dr. Edwin Wicks has assumed the duties of Medical Health Officer or both the Southcentral and Northern regions of the Alaska Department of Health. This area includes essentially all of the state from Point Barrow to the Valdez region. Dr. Francis Phillips is serving as the part time director of the Greater Anchorage Health District for Dr. Wicks, who formerly held this position. In addition to these duties, Dr. Phillips, who has recently returned from the Colorado meeting of the Western Branch of the National Tuberculosis Association where he gave a paper on the "Treatment of Tuberculosis in Remote Regions," was appointed by Governor Egan to a committee to study the problems of aging in Alaska.

Anchorage physicians have also been active in a number of community activities. Recently elected president of the World Affairs Council is Dr. Merritt Starr. Dr. Robert Wilkins is serving as president of the Anchorage Concert Association. He recently returned from a National Heart Association meeting in Philadelphia. During this trip he also attended a meeting on the feasibility of setting up a Blue Shield type medical plan in the state of Alaska. In the field of sports Dr. Calvin Johnson has become president of the recently reorganized Anchorage Basketball Association. The new president of the Anchorage Unit of the American Cancer Association is Dr. Winthrop Fish, an internist, who was Alaska's delegate to the Cancer Association meeting in New York City.

In cooperation with the Department of Medicine at the University of Washington School of Medicine, Dr. Louise Ormond recently went to Point Barrow to obtain blood samples from several hundred residents to help in further defining the enzymatic structure of the Eskimo. In addition she served as the acting medical officer in charge during the absence of Dr. George Walter, who was attending an M.O.C. conference in Anchorage. In cooperation with the National Institute of Health, Dr. Ruth Coffin, Chief of Medicine at the Anchorage Alaska Native Service Hospital, is attempting to determine the incidence of ulcers in coastal Eskimos, who ingest a large amount of seaweed. This study is being undertaken because of the recent reports of the beneficial effects of seaweed on peptic ulcers.

JUNEAU: Dr. Henry Wilde attended the Washington State Heart Association's annual symposium on October 16th and 17th at the University of Washington.

In his capacity as Chairman of the Alaska Judicial Council, Dr. William Whitehead recently visited Anchorage where he was the honored guest at the October meeting of the Anchorage Medical Society.

In September Dr. C. C. Carter was singled out for honors by the Juneau American Legion Post.

SITKA: Dr. Edward Spencer has been appointed to serve on the 22 member Alaska Committee on Aging in connection with the forthcoming White House Conference scheduled for January 9-13, 1961. This committee is composed of community leaders from all over Alaska and includes ministers, public health nurses, etc. ●

Letters to the Editors . . .

"A QUESTION OF SCIENCE"

(Editor's Note: The following is a letter from Dr. Andrew C. Ivy, Ph.D., M.D., D.Sc., LL.D., F.A.C.P., Distinguished Professor of Physiology and Head of the Department of Clinical Science, University of Illinois, Chicago, Illinois.)

I (Dr. A. C. Ivy) desire to express my personal appreciation to Dr. Merritt P. Starr for the letter he wrote entitled "A Question of Freedom" and to you, the Editors of Alaska Medicine, for publishing the letter[1].

The basic allegations which Dr. Starr attributes to me and the Krebiozen Research Foundation have been and can again be established by documentary evidence, by affidavits, and by testimony given under oath. These charges have never been denied by the presentation of evidence under oath. This means that the only report[2] actually presenting evidence to the effect that Krebiozen has no value is in part fraudulent and completely unscientific. I believe that that report was published primarily for political reasons, and that the controversy has been and is being continued primarily for political reasons, chiefly "face saving."

It is not being continued for scientific reasons. Because, since 1952, I have proposed on several occasions that a strictly scientific method be used to answer the only question of any basic merit, namely: "Is Krebiozen (a lipopolysaccharide) of any value in the management of the advanced cancer patient?"

I and the Krebiozen Research Foundation have urged that an arbitration type of committee be appointed, two members by the A.M.A., or American Cancer Society, or National Cancer Institute, two members by the Krebiozen Research Foundation, and that the four appoint a fifth member. Such a committee is urged on the basis of the assumption that both parties to the controversy may be prejudiced. (That certain officials of the A.M.A., American Cancer Society, county medical societies and hospital staffs have been and are prejudiced can be proven. Yes, an arbitration committee is unusual, but the Krebiozen situation is very unusual. To condemn the arbitration type of committee because it is unusual is a "dodge" or excuse, because the only urgent objective is to settle the controversy scientifically. An arbitration type of committee is the only type of committee which could design and conduct a study without the suspicion of the operation of prejudice. The committee would then design and conduct a "double or triple-blind" type of study, in which I (A.C.I.) would serve as a consultant to the attending physicians. (It has to be granted that I have had more experience than anyone in administering the lipopolysaccharide and in contemplating on the theory of the action of the drug. This is sound pedagogical theory and, heretofore, in the case of all my scientific discoveries or works, I have had the privilege of demonstrating publicly at scientific meetings the truth of my claims. Krebiozen represents the only instance where I have been prevented from doing so.)

I should add that I and the Krebiozen Research Foundation have refused to cooperate with a test proposed by the National Cancer Institute (NCI) in which a "committee to be appointed solely by the NCI" was proposed with the right to review our records before deciding to do a test. With certain stipulations we could cooperate with the committee proposed by the NCI but not until it was argeed that a test would be done. Then, our records and those of the A.M.A. would be studied. To leave the question of whether a full-scale investigation should be undertaken at all is to place the **ultimate** question before a committee instead of the results of a **bona fide** study. We have no absolute faith in committee opinions but do have in the results of an honest investigation.

We have accepted an "arbitration committee proposal" of Senator Paul Douglas of Illinois and of the **Chicago Daily News.**

WHAT IS AT STAKE? A new approach to the theory of the treatment of cancer. This statement requires explanation. There now exists only **one** real observation on which to base a rational hope that "a cure" for advanced cancer can be found. That observation is that in 1 out of 50,000 or 100,000 cases of advanced cancer the body cures itself of cancer. This fact constitutes one aspect of the physiological theory, now well established[3], that the body possesses natural defenses against the development and progress of cancer, and that these processes may be manipulated so as to increase or decrease the body resistance.

Krebiozen represents the first therapeutic substance developed and applied on the basis of this theory in man. It is a natural substance, a hormone; not an artificial substance. It is nontoxic because it theoretically operates normally in the reparatice and not the reactive stages of the repair of an injury. So far the lipopolysaccharide, Krebiozen, acts in a striking manner only on tumors in man. (It acts strikingly to clear cataract in most dogs, which is the only animal assay method known for this substance.) So, a definitive test on man, free from the suspicion of the operation of prejudice is essential for a test of this **new approach.**

We have been and are exploring a **new horizon** and have observed signs which should be exploited because they may lead to "the cure" of advanced cancer. Krebiozen or this lipopolysaccharide represents only an open door to a new but rapidly developing field in biology[4].

WHAT OBSERVATIONS HAVE BEEN MADE ON THIS NEW HORIZON? A few of these observations have been summarized in a preliminary manner in a small monograph[5]. In a controlled study on pain, 72% of 261 patients who knew they were receiving Kreboizen and 68% of 184 who did not, had less pain for a variable period of time. The relief was remarkable in about 30%. Ambulatory life was prolonged in approximately 25% of patients who were bedridden or only up some of the time. Among some 500 patients in whom treatment was started prior to 4 to 8 years ago, 10% survived from 4 to 9 years. We have a group of seven patients who were surgically opened, a biopsy made and then closed without treatment during the operation and without any treatment being given after closure except Krebiozen, and who have been opened again at a later date without evidence of cancer being found. Among the last 10 patients with advanced brain tumor (glioma or astrocytoma) I have personally treated, all have manifested decided improvement, and among the 10, 8 are still alive for from 1 to 5 years.

Regardless of how others may interpret such observations, I shall continue to interpret them as being due in most instances to the therapeutic action of the lipopolysaccharide administered, and shall continue to request that I be given an opportunity to demonstrate either the truth or the untruth of our interpretation. The only alternative will be to erode slowly the opposition by more and more evidence, which will unfortunately add to the ever increasing desire of the public to know the truth, to settle the controversy.

In view of these considerations I should like to emphasize the great responsibility which now confronts the profession. It is and has been my considered and sincere conviction that **Krebiozen** represents the only presently available fruit of this **new understanding** of the problem of cancer. It has already been withheld unnecessarily for several years from many cancer patients whom it might help, through no fault of our own but by the excuses of pseudo-critics. The extent of the delay in the decision to perform a test free of the suspicion of the operation of prejudice will determine the extent to which Krebiozen will be withheld from use in cancer therapy; that is, until other workers slowly and laboriously duplicate our work **in toto.** This decision is a grave responsibility.

Obviously, I have not to-date deserted and will not in the future desert what I consider to be my duty as a scientist and human being. That is, to prevent the truth from being buried under partly falsified and completely unscientific evidence.

REFERENCES

1. A Question of Freedom: M.P. Starr, Letter to the Editors, Alaska Medicine, 1:96 (Sept), 1959.
2. A Status Report on Krebiozen: J.A.M.A. 147:864 (Oct. 27), 1951.
3. Annual Report of the Sloan-Kettering Cancer Research Institute: June, 1958.
4. Observations on the Treatment of Canine Cataract: Veterinary Medicine 54:205 (April), 1959; 54:26 8 (May), 1959.
5. "Observations on Krebiozen in the Management of Cancer": A.C. Ivy, John F. Pick, and W.F.P. Phillips, Henry Regnery Co., Chicago, 1956.

Andrew C. Ivy, M.D., Chicago

Editorial Page . . .

MEDICAL RESEARCH IN ALASKA

An "outsider" might well ask if medical research could be done effectively in Alaska, and in any case, to what point? As with most activities here, investigative work is met with many difficulties, including high costs and problems with transportation and communication. These problems are compounded by the small scattered population and by lack of concentrated, highly specialized medical facilities. There are, however, unique challenges and opportunities. Physicians in Alaska should be aware of both.

If asked, our hypothetical "outsider" would surely choose cold as the most characteristic feature of Alaska—it does get cold.

In the treeless tundra and in the cold interior where the subsoil is permanently frozen, health problems multiply with each increase in population. Procurement of adequate amounts of safe water and the removal of waste products of all kinds are formidable challenges to the sanitary engineer and to the Public Health officer. The provision of adequate living space with available structural materials and the heating and ventilation of these remain unsatisfactory, largely because of cost factors. Adequate answers to these problems would no doubt reduce appreciably the high incidence of respiratory and enteric infectious disease. Although much remains to be done, the U. S. Public Health Service, through its Arctic Health Research Center, has already made significant contributions. Alaskan military forces are also actively contributing to research in this field, as well as improving clothing and field shelter to enable men to live outdoors (and fight) under arctic conditions. The recent medical interest in hypothermic states, stimulated by their obvious usefulness in central nervous system and cardio-vascular surgery, has given a renewed impetus to this field. Only a small start has been made, however, in delineating the basic ways in which man and animals adjust physiologically to a cold environment, and to the ultimate significance of these adaptations to our life in Alaska.

Another fascinating aspect of arctic life is the disruptive effect of the periods of prolonged summer light and winter darkness on basic biological rhythms. Interest in the daily cyclic changes in many physiologic functions ran high several decades ago but little can be found on these subjects in recent medical and physiologic literature. With new techniques now available, such as the use of tracer elements, chromatography, photofluerometry, and other sensitive assay methods, many measurements previously impractical or impossible, may now be accurately made.

A "new look" at this relatively blank area can profitably be taken in the ready made laboratory which the arctic provides, for in summer and winter the large native population is essentially without any fixed daily rhythm in eating, sleeping, and other activity, whereas in spring and fall the normal daily living habits common to most of the globe are followed. Fundamental information about the endocrine and metabolic cycles under these conditions is needed. Perhaps too, some light may be played on the causes for the high rates for suicide and alcoholism seemingly common throughout the far north.

By far the most important resource which the arctic may provide, however, is its human population. Although relatively small by global standards and widely scattered and difficult of access, the native population of the arctic has constituted, until recently at least, one of the few culturally and ethnically stable human groups. There are few populations elsewhere where rates of participation of 98% or better may be achieved on essentially a whole sample. Such a wholesale resource should not be squandered, but should be properly utilized in studies where these special

characteristics of population stability over a generation or more and of reliable follow-up are essential, and for those studies dealing with the specific problems of the arctic. The Alaska native is an intelligent and friendly person who has the further valuable qualification of usually speaking English. He has been in the past quite cooperative in medical studies. Through his experiences with activities such as the tuberculosis control program he has come to regard the physician, the sanitarian and the public health nurse as valuable friends. It is essential that research activities among the native group be so conducted as not to disrupt this valuable relationship. There is considerable need for more work on basic research questions and in major medical problems of this area including tuberculosis, ear, nose and throat infections, phlyctenular keratoconjunctivitis, parasitic infections and nutrition. Much work is being done by the Federal and State Health authorities. Some can be done by the expedition type of research team. There is nevertheless an inviting opportunity for private physicians in Alaska to make valuable contributions to basic research and to a solution of our pressing medical problems. ●

Robert D. Whaley, M.D., Assistant Editor.

THE PILL THAT COULD CHANGE AMERICA

(Editor's Note: The following editorial was an article written for the Woman's Auxiliary section by Mrs. Marjorie G. Fitzpatrick, R.N., President of the Anchorage Women's Auxiliary. The message was considered sufficiently important and so clearly stated that it is printed here with the permission of the Editor of the Woman's Auxiliary News.)

The "pill" that could change America is a bill now before the House Ways and Means Committee, known officially as H.R. 4700.

H.R. 4700 is the Forand Bill, which was introduced by Democratic Representative Aimee J. Forand of Rhode Island, and is an attempt to "amend the Social Security Act to provide for the Federal purchase of certain health care services for social security beneficiaries."

The pill that would be doled out to Social Security beneficiaries would be paid for by the government (out of your taxes), and prescribed by a doctor who works—not for the patient—but for the government.

We all know that no government service is free. Therefore, it is up to us, as Auxiliary members to our State Medical Society, to see that the true facts of this bill are understood by all of us and that we appraise our elected officials of our feelings on the subject.

The Forand Bill will become a definite political issue and the eventual outcome will depend on whom we elect at the polls. While we all agree that our primary aim in medicine is for better health and medical care for every person in this country, we know that we are better able to serve our fellow countrymen and patients if we do not have the Government regulating our every move.

Remember, socialized medicine is not a new concept. Countries with strong central governments have had government-run medical plans for years. As examples we can point to Germany and England. This effort to force Socialized Medicine down our throats is not new this year, the first proposals having been made in this country 20 years ago. And the proposals will continue to be made, each time wrapped in a more attractive looking package to lull the innocent and unenlightened into feeling "this is good for all Americans." Remember, too, that health cannot be insured, therefore this plan is not health insurance.

This is the "yours is mine" philosophers push for "free" medical service. Actually it is free to no one, since all will pay in accordance with their income, regardless of whether they ever need or use this government service.

Please! To defeat bill H.R. 4700, learn the full story of it, talk to your friends about it and bring the greatest pressure to bear on your elected officials at the grass roots level of home.

We, of the Medical Auxiliary, are asked to become a "leverage group" in our home towns, and as the pressure builds in each town so it will build in proportion in the State. We must defeat this bill. This is the Principal Crisis for the next year. ●

Marjorie G. Fitzpatrick, R.N.

President's Page

Let me give each of you a cordial invitation to attend the next Alaska State Medical Association Convention at Anchorage, February 18, 19 and 20th of 1960. This is in the middle of the Anchorage Fur Rendezvous, so there should be many events before and after the convention to make a visit to Anchorage interesting. Also, some of the convention evenings will be free for Fur Rendezvous events. These include the Miners' and Trappers' Ball, Eskimo dances and the Queen Contest Pageant.

Already he have a number of very interesting speakers planning to be here including Dr. Louis Orr, President of the American Medical Association; Dr. Herbert Griswold, Professor of Medicine, University of Oregon Medical School; Dr. Fount Richardson, President of the American Academy of General Practice; Dr. James Miller of the Mason Clinic; Dr. Russell de Alvarez, Professor of Obstetrics and Gynecology, University of Washington School of Medicine; Dr. John Schenken, Pathologist from Omaha, Nebraska, representing the American Cancer Society; and Dr. Julius Wilson of the American Trudeau Society. We are also looking forward to having our Alaska doctors on the program. If you have a paper to present, please give us notice as soon as possible. For each paper presented, we are requesting a title and a one hundred-word summary which will be included in the program.

If you are planning to come to the convention, please write to Dr. Charles St. John, 501 L Street, Anchorage, Alaska, as soon as possible and tell him of your housing requirements since he is Chairman of the Housing Committee. Other committee chairmen appointed so far include: Publicity, Dr. Michael Beirne; Banquet, Dr. Robert Wilkins; Transportation, Dr. Lester Margetts; Resolutions, Dr. William Mills; and Convention Manager, Dr. Rodman Wilson. I will be program chairman.

Committees which have been appointed in recent months include the School Health Committee of which Dr. Joseph Deisher is chairman. Members of the committee are Dr. John Tower, Dr. Ralph Carr, Dr. John Fenger and Dr. Lawrence Dunlap. Dr. Henry Wilde is chairman of the Rehabilitation Committee and his committee members include Dr. William Woodcock, Dr. Russell Smith and Dr. Francis Phillips. Dr. Jack Gibson is chairman of the Emergency Medical Care and Civil Defense Committee. His committee members include Dr. Henry Wilde, Dr. Frank Montmorency and Dr. Henry Storrs. Dr. Charles Chenoweth is chairman of the Committee on Aging and his committeemen include Dr. Arthur Wilson, Dr. A. Holmes Johnson and Dr. John Clements.

It has certainly been a great pleasure to work as your President during the past months. The state convention is the high point of the year and from all indications, we are going to have a very pleasant and stimulating time together. I hope that practically every doctor in the state can attend the convention. Best regards until we meet in February.

GEORGE E. HALE, M.D., President
Alaska State Medical Association, 1959-1960

U. S. Public Health Service News

DIVISION OF INDIAN HEALTH
ALASKA NATIVE HEALTH SERVICE

Dr. Kazumi Kasuga was appointed Medical Officer in Charge of the Alaska Native Health Service Area Ofice at Anchorage on August 29, 1959, succeeding Dr. Joseph A. Gallagher who was transferred to the Central office of the Division of Indian Health in Washington, D. C.

A specialist in pulmonary diseases and internal medicine, Dr. Kasuga has been at the Indian Hospital in Tacoma, Washington, since 1946. He was commissioned Senior Surgeon in the Regular Corps of the Public Health Service in August, 1957, and promoted to Medical Director in April, 1959. At Tacoma he first served as Chief of the Tuberculosis Service for the Bureau of Indian Afairs. Following the transfer of the Indian Health Program to the Public Health Service, and the conversion of the Tacoma Hospital to a Tuberculosis Sanitorium, he served as Clinical Director for the hospital. He became Deputy Medical Officer in Charge in 1957, and had been Medical Officer in Charge since June 1, 1959.

During World War II he served as Medical Officer in the War Relocation Authority and the U. S. Army Medical Corps. He also has been an instructor in Medicine at the University of California School of Medicine, from which he was graduated in 1938.

Dr. Kasuga is a member of the American Medical Association, The American Trudeau Society, and the American College of Chest Physicians.

Dr. Kasuga served his internship and medical residency at the San Francisco (California) City and County Hospital. Dr. and Mrs. Kasuga have two children: Sidney, age 19, and Joyce, age 15.

Dr. James A. Hunter, Jr., a career officer in the Public Health Service assumed the duties of Medical Officer in Charge of the Alaska Native Hospital in Anchorage October 2, 1959.

In his new post Dr. Hunter will work under Dr. K. Kasuga. Dr. Hunter has been with the Public Health Service since 1941 and holds the rank of Medical Director. Before coming to Anchorage he was Clinical Director at the Federal Medical Center in Springfield, Missouri. He has also served as Medical Officer in Charge of the Service's hospital in Detroit, Michigan.

A graduate of Baylor and Texas universities, Dr. Hunter served with the Coast Guard in the Pacific during World War II and participated in the Byrd expedition to Antartica in 1946 as a Medical Officer.

Dr. Hunter is currently residing at 2503 East 20th Avenue in City View with his wie and three children.

Another addition to our staff is Dr. Mahlon Shoff who entered on duty September 29, 1959, and was assigned as Chief of the EENT Department of Anchorage Hospital. He was formerly assigned to the Public Health Service Hospital at Staten Island, New York.

Field News

MOCs of all Public Health Service, Alaska Native Hospitals will be coming into Anchorage the week of February 15 for a semi-annual meeting. This meeting will overlap with the Alaska State Medical Association meeting and a special program presented by Dr. George A. Adams, Chief, Operational Methods Section, Cancer Control Program, Bureau of State Services, U. S. Public Health Service. Dr. Paul A. Young, Assistant Clinical Professor of Gynecology at the Harvard Medical School and Dr. John W. Cashman, Acting Chief, Program Services Section, Cancer Control Program, Division of Special Health Services, U. S. Public Health Service, will also speak to the Association. On the evening of February 19 these doctors will give demonstrations including one of various cervical biopsy techniques, at the Anchorage, PHS Alaska Native Hospital.

Expansion of Field Health Clinics is being initiated at the present. Regularly scheduled monthly clinics will be held at over twenty-two villages with several times that many being covered on a less frequent basis, the emphasis being on preventive health services. These clinics will range from Wainwright, in the north, to Unalaska, on the Aleutian Chain.

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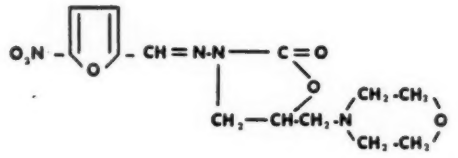

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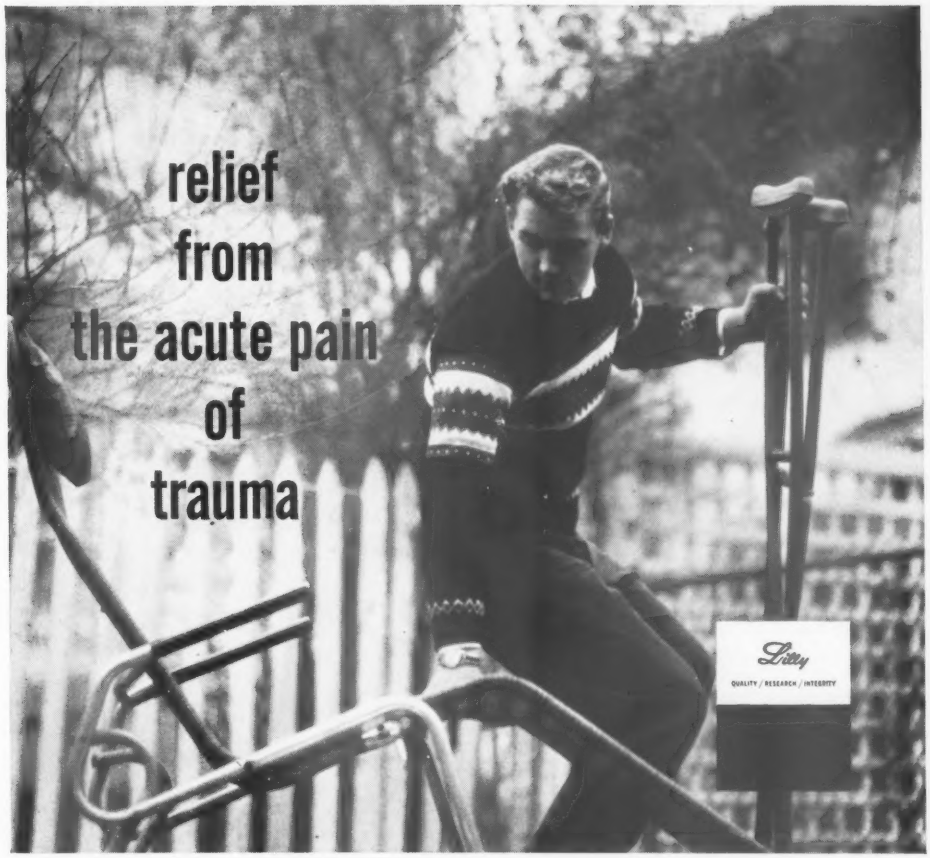


DARVON® COMPOUND potent · safe · well tolerated

The clinical usefulness of Darvon® (dextro propoxyphene hydrochloride, Lilly), alone and in combination, has been substantiated by more than 100 investigators in the treatment of over 6,300 patients in pain. A consolidation of these reports shows that 5,663 (89.8 percent) experienced "effective analgesia."

Darvon Compound combines in a single Pulvule® the analgesic action of Darvon with the antipyretic and anti-inflammatory benefits of A.S.A.® Compound (acetylsalicylic acid and acetophenetidin compound, Lilly). When inflammation is present, Darvon Compound reduces discomfort to a greater extent than does either analgesic given alone.

Usual dosage: 1 or 2 Pulvules three or four times daily.

Also available: Darvon, in 32 and 65-mg. Pulvules.

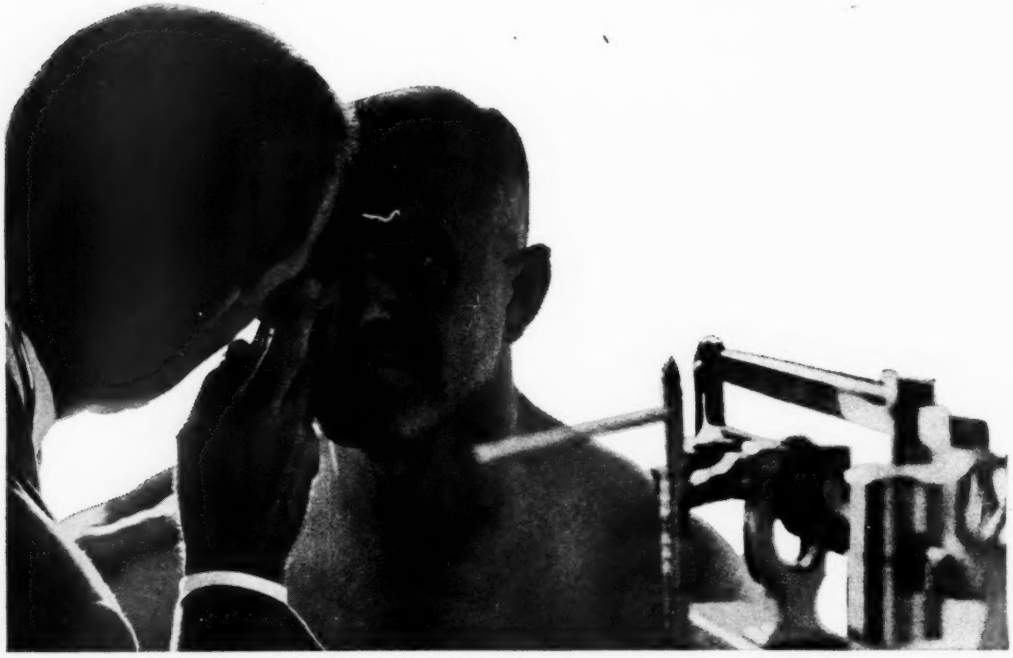
Usual dosage: 32 mg. (approximately 1/2 grain) every four hours or 65 mg. (1 grain) every six hours.

Darvon® Compound (dextro propoxyphene and acetylsalicylic acid compound, Lilly)

ELI LILLY AND COMPANY · INDIANAPOLIS 6, INDIANA, U.S.A.

920249

The drug that lowered this patient's blood pressure *for the first time without side effects*



Singoserp™

(syrosingopine CIBA)

- *a major improvement in rauwolfia*
- *a major advance in antihypertensive therapy*
- *solves the side effects problem in most patients*

◀ Patient P. K. first seen with blood pressure of 220/138 mm. Hg; complained of headache, palpitation, nervous tension, hyperhidrosis. Therapy with chlorothiazide and mecamylamine lowered blood pressure, but patient was troubled by mouth dryness, chest pain, constipation and nocturia (twice a night).

◀ Singoserp was added to the regimen. After 5 months of therapy, pressure ranged between 120/84 and 140/100. One month later chlorothiazide was stopped and patient was maintained on Singoserp alone, 1 mg. b.i.d. Favorable blood pressure continues and he feels well. Since taking Singoserp no side effects reported.

Prescribe Singoserp alone for new patients to lower blood pressure without creating the side effects problem posed by conventional rauwolfia agents.

Prescribe Singoserp for patients now on antihypertensive therapy to lower the dosage requirements of other agents — or even, in some cases, eliminate them altogether.

DOSAGE: Initially, 1 to 2 tablets (1 to 2 mg.) daily.

SUPPLIED: Singoserp *Tablets*, 1 mg. (white, scored); bottles of 100.

SAMPLES available on request. Write to CIBA, Box 277, Summit, N. J.

CIBA SUMMIT, N. J.

9/-147MB